GoldFFX User Guide *Version 1.2*

GoldFFX Application User Interface

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1   Introduction

1.1   What is GoldFFX?

GoldFFX is a Chemwatch database application developed for the basic management of (M)SDS for chemicals used in the workplace. The GoldFFX system is amalgamated into the Home module consisting of the Search panel, (M)SDS and Labels panel, Tools panel, Folder panel, Risk Assessment module, Credo Module, DGen Module and Systems Dashboard. These module and key features are described in the table below.

Table: Key Features and Use

Key Feature	Feature Elements	Description	Use
Search panel	Name/CAS field	Search for materials	Access to Vendor, Mini, Gold (M)SDS, Labels and Emergency Reports
Search panel	Vendor field	Search for material using Vendor (Manufacturer, Supplier) name	Lists parent company and subsidiary operating businesses Lists materials available in the database by that company Access to Vendor, Mini, Gold, Labels and Emergency Reports
Search panel	Query Builder	Create a search query	To enable user to create a query to apply in searching for materials by a specific search string (tailored for advanced users)
Search panel	Full	Full database access	Search for materials from the full Chemwatch database path
Search panel	Own	Own database access	Search for materials from the Own (customized) database path which may contain your company's inventory
Search panel	Show Own	Customer Inventory Listing	Lists your company's own inventory registered in the Chemwatch database
(M)SDS and Labels panel	Vendor, Gold, Mini, Labels, Emergency	Buttons for available types of reports	To enable user to select a button for the type of report to display Access to Vendor, Mini, Gold, Labels and Emergency Reports
Tools panel	Tools	Tools to edit or filter	To enable quick access to tools for editing and filtering information or data
Folder panel	Folder Structure	Folders and stores	To enable users to create and manage folders

This user guide will provide information on the application's functionality and steps on how to use the system. The topics covered include searching for materials, viewing various types of reports, creating and managing folders, adding materials and editing materials registers within folders, printing, saving and emailing various types of reports, exporting reports in to various available formats.

1.2   Application User Interface Elements

The main topics covered in this document include;

- Searching the database for materials
- Searching the database for folders
- Creating folders and Editing folders
- Adding materials into folders
- Editing materials register in folders
- Generating reports and the Report Generator Tool
- Access to various types of Reports and (M)SDSs
- Filtering by hazards
- Conducting Risk Assessments
- Creating mixtures
- Creating and customizing labels

Table: Key modules and features and use

Module	Feature Elements	Description	Use
Home	Simple Search panel, (M)SDS, Emergency and Labels panel	Search for materials by material name and/or vendor	Search for materials by various options; to access Vendor, Mini, Gold (M)SDS, Labels and Emergency Reports
Materials Register	View Materials and Documents table	Materials table Documents table	Access to a list of materials and available Vendor documents
Filters	Hazards Filtering	Filter materials register	Filter by various types of hazards
	Edit Manifest	Edit manifest register and quantities	Copy, move, remove (delete) materials, edit quantities
Reports	Generate Ingredients Report	Extrapolate ingredients contained in materials in a folder	Extrapolate ingredients contained in materials in a folder and print or save or email report.
Part Numbers, Preferred Names	Part numbers and Preferred Names	Create or Edit Part Numbers or Preferred Names	Create or Edit Part Numbers or Preferred Names for materials in folder register.
QueryBuilder	Advanced Search in Search panel	Create search criteria as queries to allow a combination of search options	Create a search criteria and search for materials by applying the query based on the database available in the system. The Search criteria will be determined by the type of operators (***contains, equals, start with, does not contain, does not start***

			with, end with, and does not end with).
Folder Panel	Folder Tree Structure	Contains systems directories; Enterprise, Collection, Folders, Manifest and Deleted	Allows users with read-write permission to create folders, copy, move, rename, remove, print and edit folder properties.
Risk Assessment	Control Banding Risk Assessment	ILO, UN, Jobs, Risk Assessment Matrix	Allows users to conduct ILO (Health) and UN (Dangerous Goods) risk assessments based on the control banding risk assessment model.
D-Gen Lab	Document Generator for Labels	Default Templates and User Defined Templates	Allows users to customize existing default Chemwatch labels and create new label templates and/or documents by selecting specific datapoints available in the database.
CREDO	Credite Posteri	Classify mixtures	Allows users to create a mixture based on available Chemwatch Gold (M)SDS Data and generate labels and Mini (M)SDS. It also provides the ability to publish the mixture into your own inventory.

1.3 Login User Profiles

Generally, the system can be set by the administrator for automatic login or manual login. The types of user profiles may range from *basic users with read only*, *users with edit rights* to administrative *users with some level of control of the systems settings*. A summary of the various types of users is listed in the table below. You may identify the type of user profile applicable to your login as provided by the domain administrator of the system within your business or institution from the role functions below.

Table: Functions and User Roles

Function	User Profile	Description	Permission
Domain administrative role	Primary Administrator of the program	Entire Access to the system	Full access with read-write permission to the entire system. Able to set up users and respective privileges.
Management role	Management level	Management of specific areas of the system	Ability to edit, read-write permission and access to assigned role permissions
Basic role	General use level	General use may have limited access and read function	Ability to read data, search for material, view various accessible reports as per the set privileges by the domain administrator

1.3.1   Getting Started
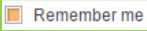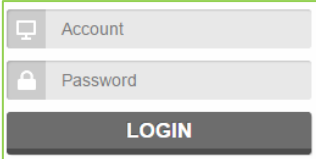
Login

The Chemwatch system is accessible online through the web address link below.

http://jr.chemwatch.net/chemwatch.web

Figure: Manual Login Page

Table: Login Elements

Login Page Elements	Function	Description
Remember me	Checkbox to remember login data	If the checkbox is selected, the browser will remember your previous login for the account and user login. The password will always be required to be entered for security purposes.
Forgot password?	Change password	This feature allows Chemwatch to send an email for password change. User will be required to reassign a new password.
Old login	Two fields required to login	The old login enables users to employ two login fields; account and password

User Authentication

Online user authentication may use one of the following options to gain access to the Chemwatch system through your business internal network.

1. Application web address link where manual login with three fields required to be filled [*account, user login, password*] or two fields [*account, password*] (optional)
2. Automatic login using autologin script
3. Single Sign On authentication

Live Help: New Online Tools and Round-the-Clock Support

With Chemwatch reaching an increasingly greater number of global organisations, recent initiatives have been introduced to enhance our support systems. By utilising the latest technology, our Live Help tools allow us to better communicate with you and respond to your enquiries and enable you to track work done on issues you have reported to us.

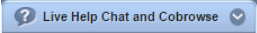Figure: Knowledgebase and Ticketing System
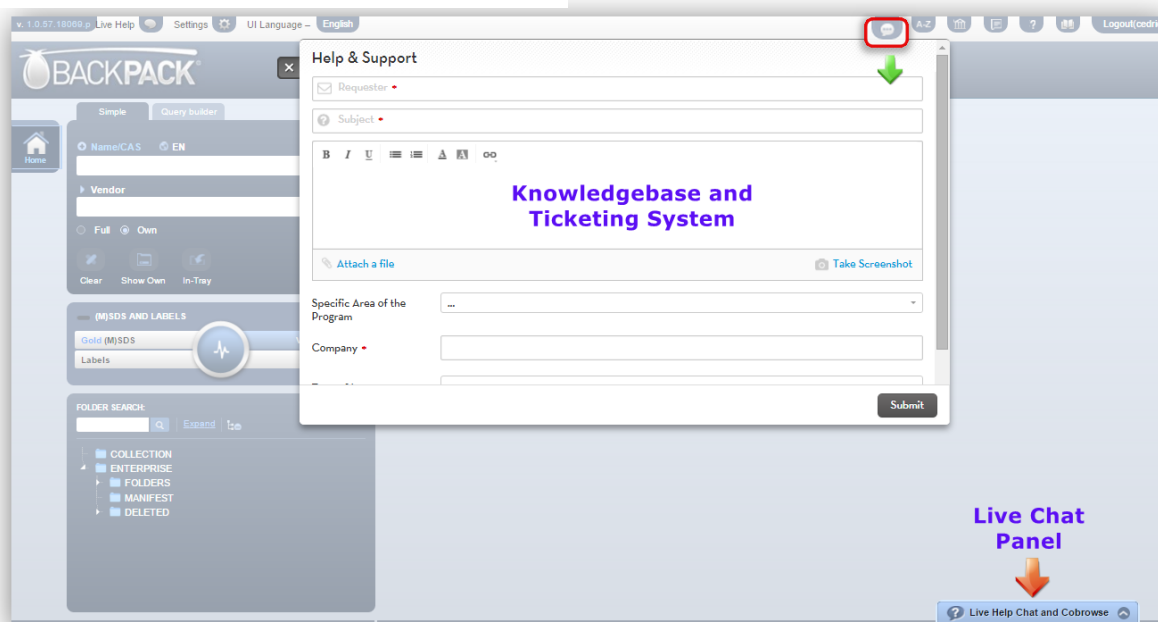
The enhancements to our Live Help tool ensure:

- 24/7 access to our Helpdesk and IT staff
- Improved troubleshooting and follow-up
- Any issues reported are graded and assigned the appropriate priority
- Issues are fixed within a reasonable timeframe
- You can check for any updates to issues you reported

Figure: Home Page Live Help
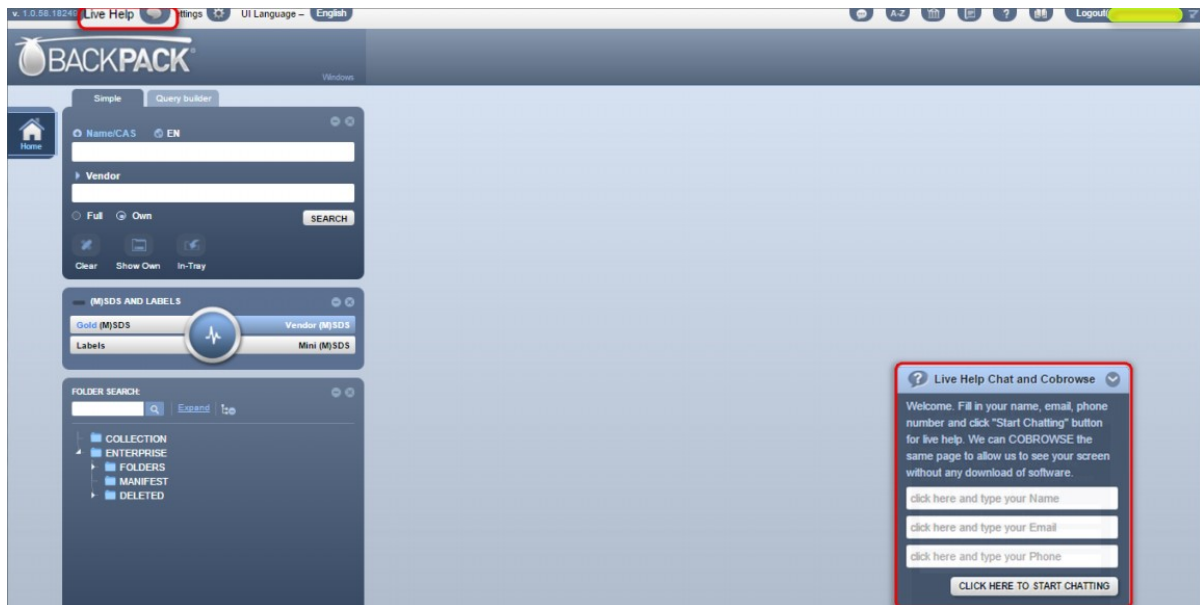
24/7 Access to Help

24/7 live chat support service is now available. Our Helpdesk is always manned by qualified Chemwatch personnel, and our IT department also provides round-the-clock support.

Live Help is accessible direct from your Chemwatch system interface, allowing our Helpdesk staff can assist you through online text-based chat and co-browsing/screen sharing to further troubleshoot or demonstration on how to use the system.

Figure: Home Page Live Chat
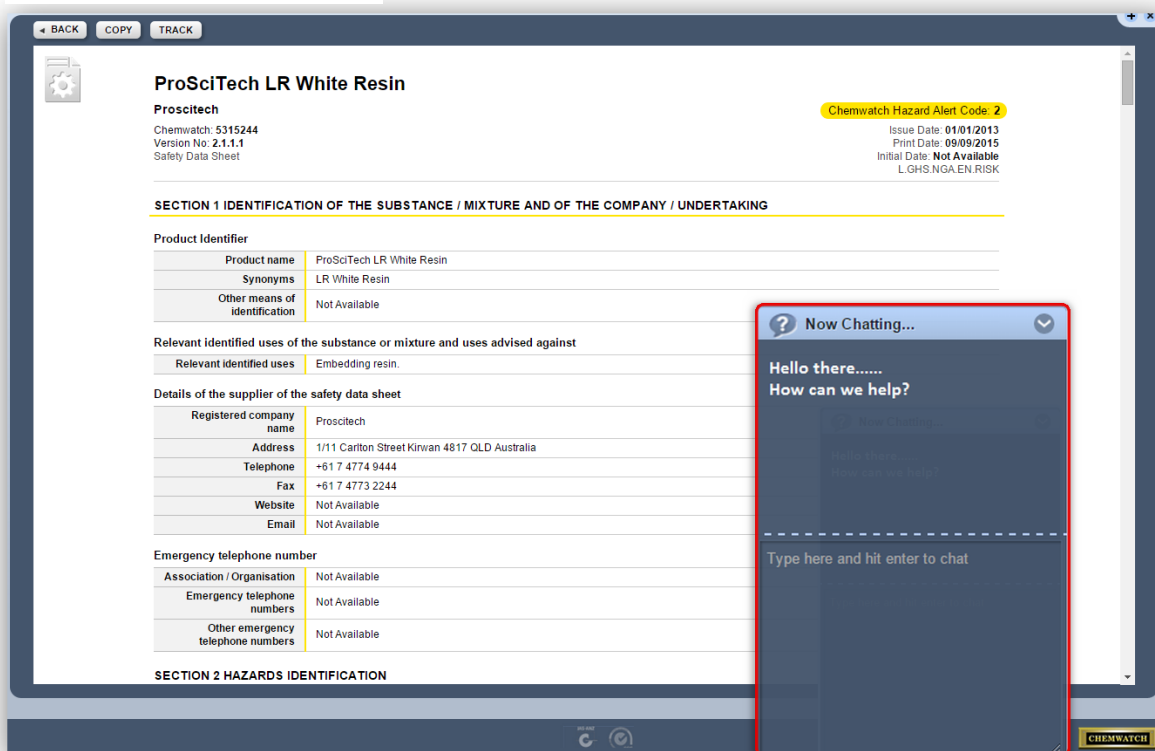
Solutions to Support You Better

By utilising solutions such as Freshdesk and Olark, each Live Help session is directed to a particular Chemwatch Support Operator to assist and there is a ticket record created for your live help session.

Knowledgebase and Ticketing System

Search for articles and solutions through the help and support icon and submit tickets whilst live on Chemwatch application. Access to the Knowledgebase and Ticketing system requires authentication, ensure to sign up with your email address and you will prompted to create your own password. Click on the link below to sign up, track progress on submitted tickets, add notes and set ticket priority.

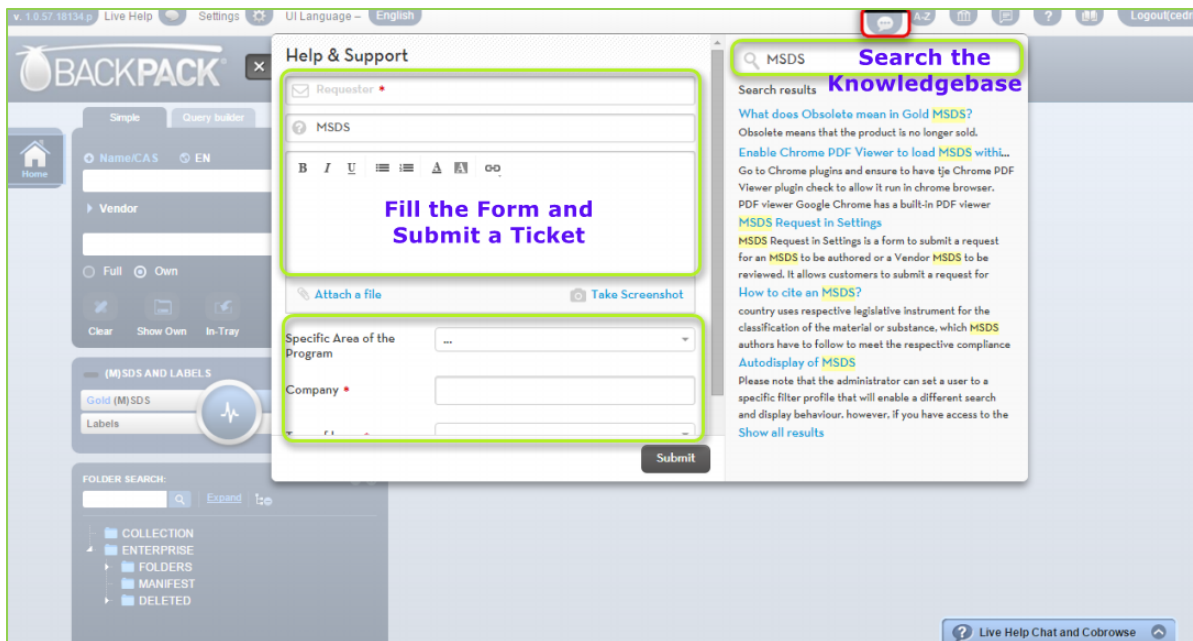https://chemwatchhelpdesk.freshdesk.com/helpdesk/tickets

Freshdesk Ticketing and Knowledgebase system has been integrated into the Chemwatch application user interface through the help and support icon .

Figure: Ticketing System and Knowledgebase Help

Enquiries received via telephone, email, chats are subject to a ticketing system for further troubleshooting and follow-up. Any issues you report to us are graded and assigned the appropriate priority to ensure they are fixed within a reasonable timeframe. For every ticketed enquiry, you will receive an acknowledgement about the ticket via email. Cases that require expert knowledge are escalated to our experts in the field, who are able to provide you with more targeted advice. If you need an update on a ticket that has been lodged by us, we can provide a link for you to log into Freshdesk and search by your ticket number, or to view the tickets related to your company. You are able to check for these updates at any time.

Select the link below for more information on how to lodge a ticket through the ticketing system portal. You may sign up if you do not have a login through the sign up button.

https://chemwatchhelpdesk.freshdesk.com/support/solutions/articles/5000678651-submit-a-ticket-

Ticket Priority Levels

All tickets raised in the Chemwatch Freshdesk Ticketing System are subject to review and follow up action where applicable. A newly submitted ticket issue will be assigned ticket priority level based on business measure of priorities for fixing bugs, new features, and errors by using the following levels of priorities based on Chemwatch's quality assurance process.

Table: Ticketing System Priority Levels

Level	Business Measure	Ticket Priority
1.	Blocker requires immediate attention	Urgent
2.	Highly important issue, subject to a fix and release update	High
3.	Moderately important issue, subject to escalation for a suitable fix and release update	Medium
4.	Low importance, subject to escalation for a suitable fix and release update	Low

Screen Sharing

By collaborating on the web through co-browsing, our Helpdesk staff can assist you with your query right there on your computer.

Figure: Live Help Cobrowse
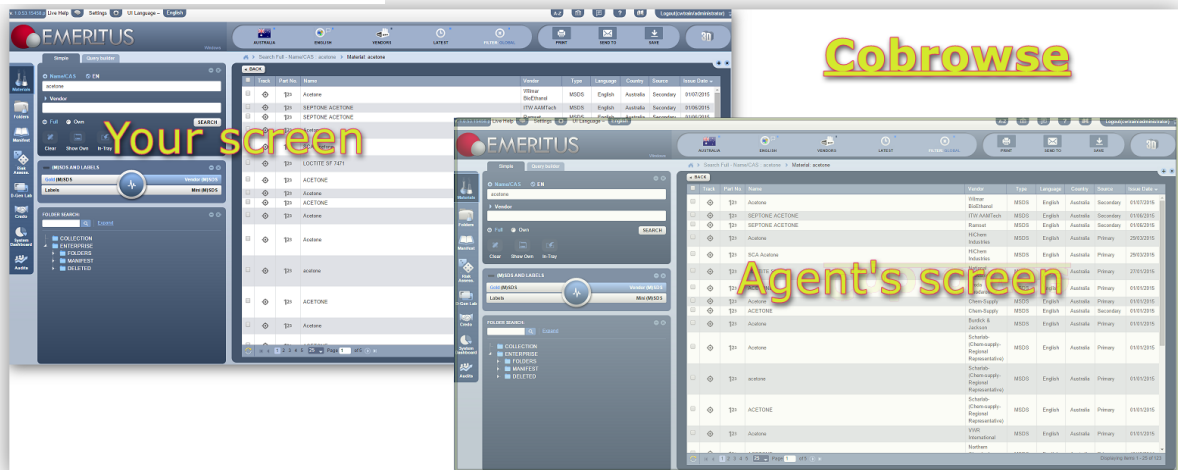
If screen sharing is required, the system will prompt you to allow co-browsing permission, which will give our staff access to control just the internet browser window you are running your Chemwatch system in. You'll then be able to see the mouse pointer change as we step through the system with you.

Co-browsing allows Chemwatch agents to see what issues have arisen for you, and to demonstrate solutions online so we can work through the same web screen of the system.

2 Searching the database

This section describes some of the most important common methods you can use to search the database effectively by Simple search method and advanced Query Builder method. The Simple search method covers searching the database by;

- **Material Name**
- **Vendor Name**
- **Material and Vendor**
- **Query Name**

Simple Search

Simple search encompasses searching the database by name of the material, product, synonym, chemical name and other search operator options such as CAS number, CW number, DG Class, Part Number and many more. Generally, the database contains two primary paths to direct a search to look up for the searched term or word in the 'FULL' or 'OWN' database. *What do the primary database paths mean?*
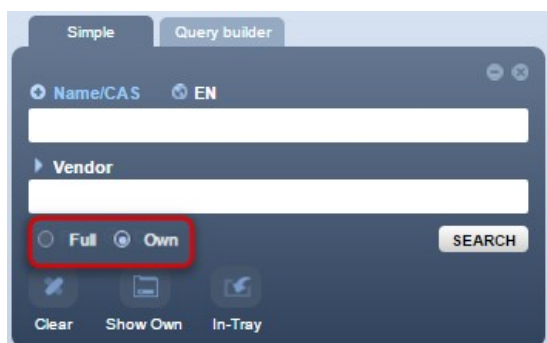
| Search	Description
Material Name	Search by Material Name only
Vendor Name	Search by Vendor (Manufacturer/Supplier)
Material and Vendor	Combination search by both Material Name and Vendor Name
Query Name	Create a search query and use the query to search for materials

Figure: Search Path

Path	Description
Full	Chemwatch database collection
Own	Custom inventory registered in the Chemwatch database collection
Show Own	Lists all the registered materials in your own database

Advanced Search

The Query Builder method is an advanced search that allows novice and experienced users to build queries to be used to search the database using specific combination fields that apply Boolean search method. Key words are used to retrieve records in the database by means of search operators, AND, OR and NOT.

| Operator	Description
AND	Retrieves records that contain the word
OR	Broadens the records that contain the word

Figure: Query Builder Panel
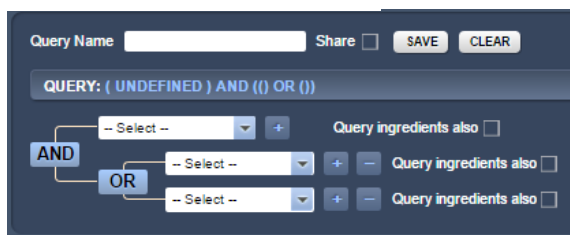
2.1   Searching for Materials by Simple Method

The simple search method use generic names of products, chemicals, pure substances, synonyms, part numbers, preferred names, CAS numbers, CW numbers, DG class, Risk Code, Packing Group, Sub Risk, UN No., Poison Schedule and Structure. This sub-section covers the context and steps on how to use the search panel to look up for an (M)SDS for a specific material by Name/CAS, Vendor, CW number. The tables below lists the search options of the Name/CAS drop down list and their respective description of these search options.

Figure: Name/CAS Search Options
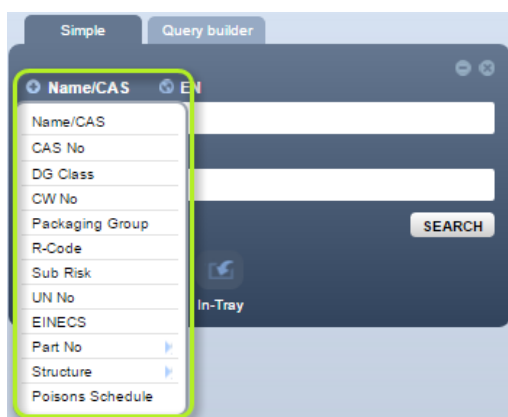
Name/CAS Drop Down List of Search Options

Select the ⊕ icon to list the search options and choose the specific field to apply to the simple search method

Table: Simple Search Options and Descriptions

Search Option	Description	Use (Search by)
Name/CAS	Name of material	To allow user to search by the name of the material to retrieve Vendor, Mini, Gold (M)SDS, Labels and Emergency Reports. Click the link below for further information on UIPAC names. http://www.iupac.org/home/publications/e-resources/nomenclature-and-terminology.html
CAS	Chemical Abstract Substance Number	This is a unique numeric identifier in the CAS REGISTRY designated to a known substance. Click the link below for reference. http://www.cas.org/content/chemical-substances/faqs

Vendor	Search for material using Vendor (Manufacturer, Supplier) name	Lists parent company and subsidiary operating businesses Lists materials available in the database by that company Access to Vendor, Mini, Gold, Labels and Emergency Reports
DG Class	Dangerous Goods Class	DG Classes 1 to 9 are listed to choose the primary class field. Refer for more in the link. http://www.unece.org/trans/danger/danger.html
CW No	Chemwatch Number	Chemwatch numbers are assigned to all materials registered in the Chemwatch database for both pure and non-pure substances.
Packing Group field (PKG)	Packing Group as per DG classification	Packing Group is the grading of danger for materials classed as dangerous goods. <table><tr><th>PG</th><th>Level of Danger</th></tr><tr><td>I</td><td>Greater danger</td></tr><tr><td>II</td><td>Medium danger</td></tr><tr><td>III</td><td>Minor danger</td></tr></table>
R-Code	Risk Code	Risk code is a hazard classification used to classify a substance. Click the link download classification guide.
Sub Risk	Sub Risk	Sub Risk as per DG classification
UN No	United Nations Number	UN No is a UN four digit identity number that identifies a hazardous substance in the international transport framework.
EINECS	EINECS number used in European countries	European Inventory of Existing Commercial Chemical Substances. These are substances considered phase-in substances under the REACH Regulation.
Part No, User Part No, Vendor	User dependent part number, vendor part number	Vendor Part number assigned to a product or User assigned Part Number
Structure	Draw a 2D molecular structure	Search the database by use of a chemical molecular structure. Smiles strings can be used to search for specific material.
Poison Schedule	Classification of medicines and poisons in Australia	Poison schedule number between 1 and 10 to find available materials scheduled as medicines and poisons in the database.

2.1.1 Searching by Name of the Material

The following steps illustrate the common sequence on *'how to use the simple search method'*, to look up for a Vendor (M)SDS from the full Chemwatch database collection.
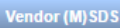
Steps: Searching by Material Name

1. Select the **Home** module button 🏠
2. Press the '**Vendor (M)SDS**' button Vendor (M)SDS from the (M)SDS panel
3. Click the "**Full**" circle (radio button ⦿ Full) in the Search panel to set the database path to full collection
4. Type the "**Name of the Material**" in the Name/CAS text field
5. Select the *material name* from the autocomplete search list panel

Figure: Search by Name of the Material

6. Select the *name of the document* by a specific vendor of interest to display
7. **Print**, email or save the (M)SDS.

Figure: Document List of Vendor (M)SDS
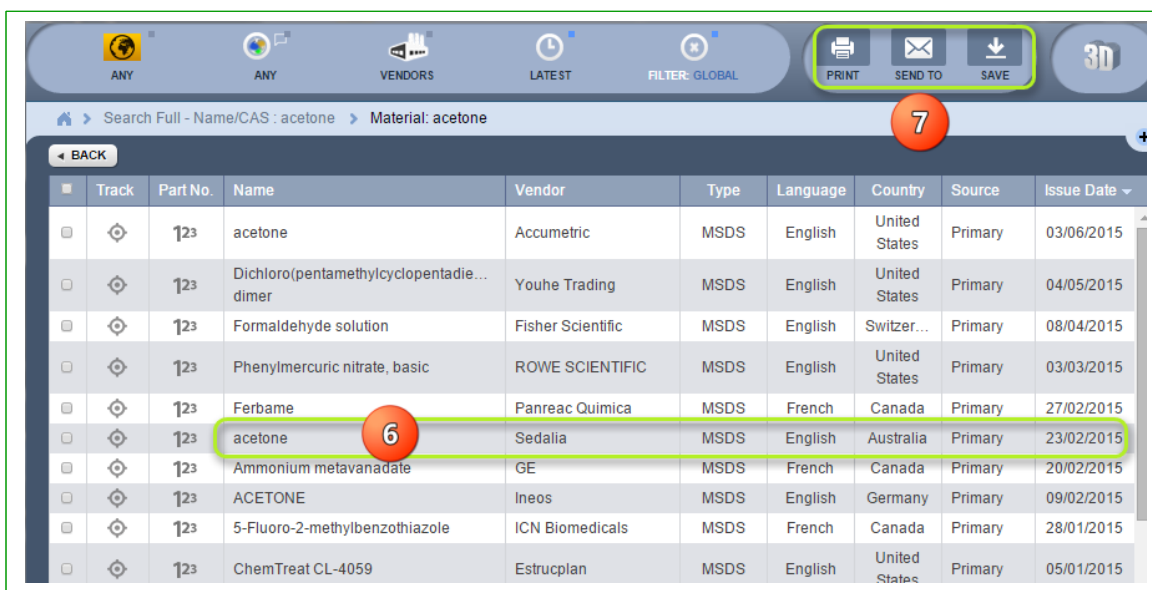
Figure 12: Display of selected Vendor (M)SDS

7/13/2014   Merck Pty. Limited - Material Safety Data Sheet

Date of Issue: **February, 2014**

Merck Pty. Limited
ABN 25 005 064 791
207 Colchester Road
Kilsyth, Vic 3137, Australia
Telephone: +61 (0) 3 9728 7600
Fax: +61 (0) 3 9728 1351
Emergency Telephone: +61 (0) 3 9728 7600
Business Hours: 8:15am to 6:00pm
Monday through Friday

Material Safety Data Sheet
Hazardous according to criteria of NOHSC

Product Code: **1006801**
Acetone

Identification

Product Name: Acetone
Other Names: ACETONE
Organic solvent
Product Code: 1006801
UN Number: 1090
Dangerous Goods Class & Subsidiary Risk: 3
Packaging Group: II
Hazchem Code: *2YE
Poisons Schedule Number: S5
Use: General laboratory reagent.

2.1.2 Searching for Material by Vendor

Steps: Searching for Material by Vendor Name

1. Select the **"Home"** module button 🏠
2. Press the **"Vendor (M)SDS"** button [Vendor (M)SDS] on the (M)SDS and Labels panel
3. Click "**Full**" circle (radio button ⊙ Full) for the 'Full' search in the Chemwatch collection
4. Enter the *name of the supplier or manufacturer* in the vendor text field

Figure: Search by Vendor

5. Select the *vendor name* from the automatically drawn list in the database

Figure: Vendor Drop down List

6. Click on the *company name* to list the materials for entire vendor or choose country
7. Select the *name of the material* of interest to display Vendor (M)SDS.

Figure: Vendor Group by country
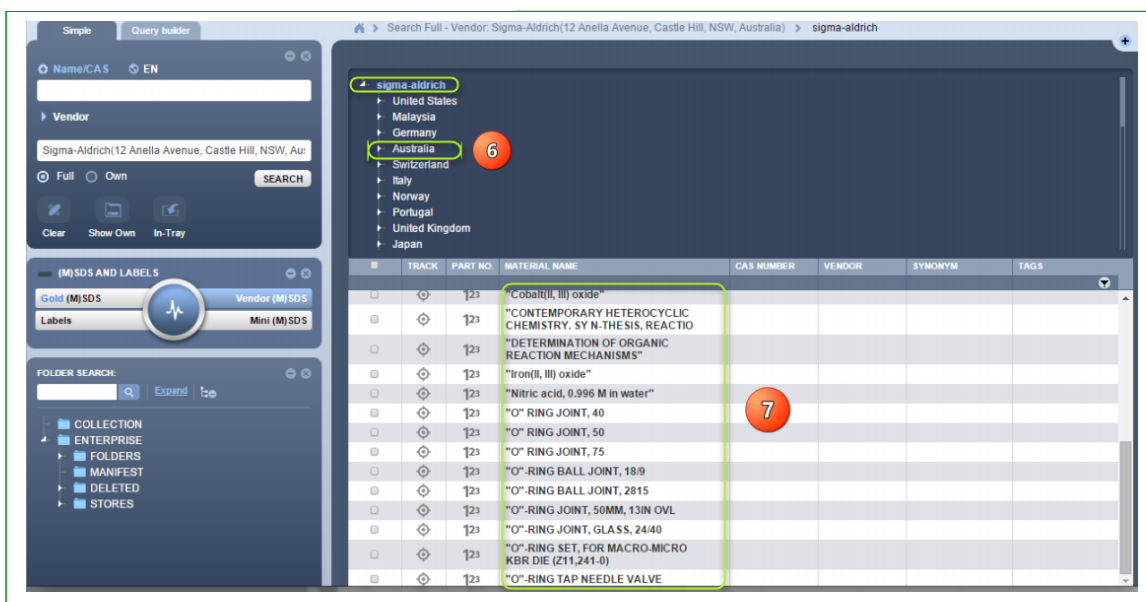
2.1.3 Searching for Material by Molar Concentration

Searching for specific molar concentrations may not yield results for all concentrations due the non- availability of all types of concentrations of materials, chemicals, products, compounds. In this case, Chemwatch recommends that if a concentration that is greater than the one you are searching for, then please use the higher molar concentration if available to obtain Gold (M)SDS, Labels, Emergency reports. The table below shows available concentrations by searching by "value" and "m" in the search name field to check using the auto-complete wheel if that concentration is available. If not, try a higher concentration value

Steps: Searching for a Material by Molar Concentration

1. Select **"Home"** module button
2. Select **"Gold (M)SDS"** button Gold (M)SDS from the (M)SDS and Labels panel
3. Click on the "Full" button (circle radio button ○ Full) from the search panel

   *(Note that you may also search from "**Own**" ○ Own option, which means your own inventory of material already existing in your collection in the system*
4. Click on the **"Name/CAS text field"** and then type the value and include "M" in the name text field, for example; 0.1M
5. Scroll down the vertical bar to look for the respective suggested chemical names associated
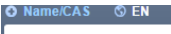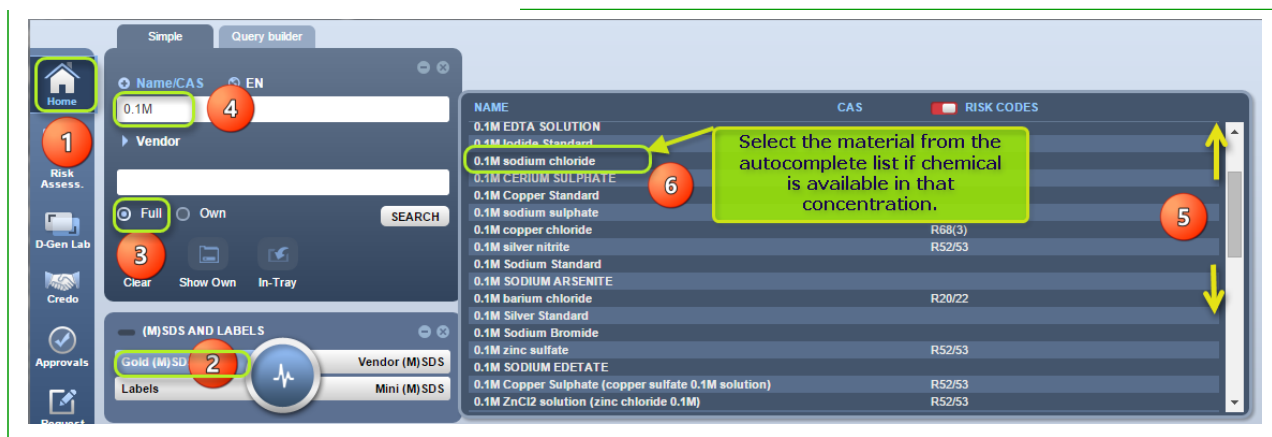
   with the molar concentration. Note that you may also roll the mouse to scroll within the autocomplete panel.

Figure: Search and autocomplete panel result

6. Select the material concentration to display Gold (M)SDS

Figure: Search and autocomplete panel result
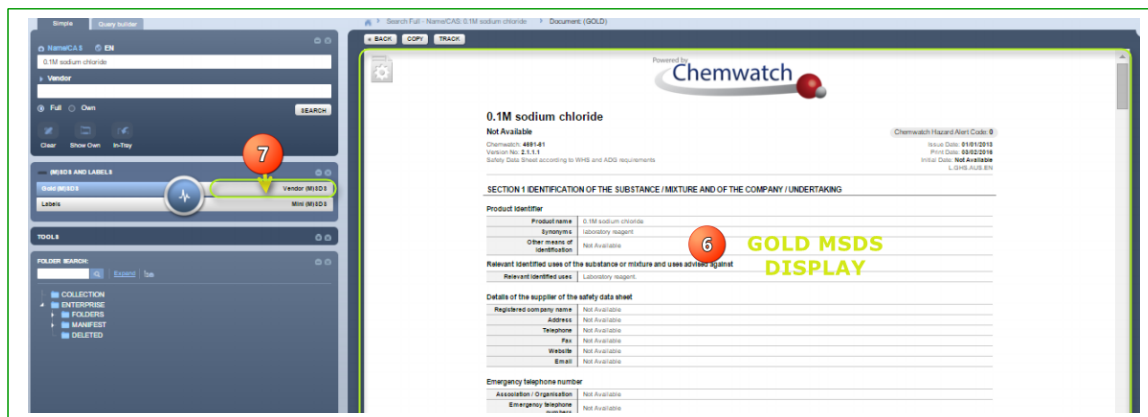
7. If the interest is for a specific Vendor (M)SDS, then select the Vendor (M)SDS button [Vendor (M)SDS] to display available document(s) from various suppliers or manufacturers.

2.2   Searching for a Folder

Folder search is applicable in the Folder Panel. The steps below show 'how to find an existing folder within the folder tree structure. In the illustration below, folders have already been created and hence; it is possible to look up for an existing folder in the collection.

Steps: Searching by folder name

1. Select the **"Home"** module button 🏠

2. Enter the *name of the folder* by typing in the "**folder search text field**" [FOLDER SEARCH:]

3. Click the **"magnifying glass"** icon [🔍] to search for the name of the folder

4. If folder is found within the tree structure, it will be highlighted.

Figure: Folder Search

2.3 Temporary Filtering Lists

The term **"Vendor"** is used interchangeably with "Manufacturer or "Supplier" in the business industry. The activity below illustrates the ability to temporarily filter a document list for a specific Vendor (M)SDS by country, language, Vendor, latest and custom filter (current setting is always based on the default parameters). In this activity, we will search for "Acetone" and then temporarily filter the resultant document list to show only the latest (M)SDS available for the vendor "3M" located in Australia.

Steps: Filtering Document List by Vendor
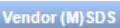
1. Select the **"Home"** module button 🏠
2. Press the 'Vendor (M)SDS' button Vendor (M)SDS from the (M)SDS panel
3. Click the **"Full"** circle (radio button ○ Full) in the Search panel to set the database path to 'Full'
4. Type the *name of the material* in the Name/CAS text field
5. Select the *material name* from the autocomplete search list panel

Figure: Search by Name of the Material

6. Select the '**Vendors'** filter button from the Filter's toolbar to choose the respective vendor
7. Enter *Vendor name* in the text field for a quick look up, otherwise, the available vendor list is displayed in the panel.
8. Click on the *Vendor name* to "**apply the filter"**
9. Select the *document name* to display Vendor (M)SDS

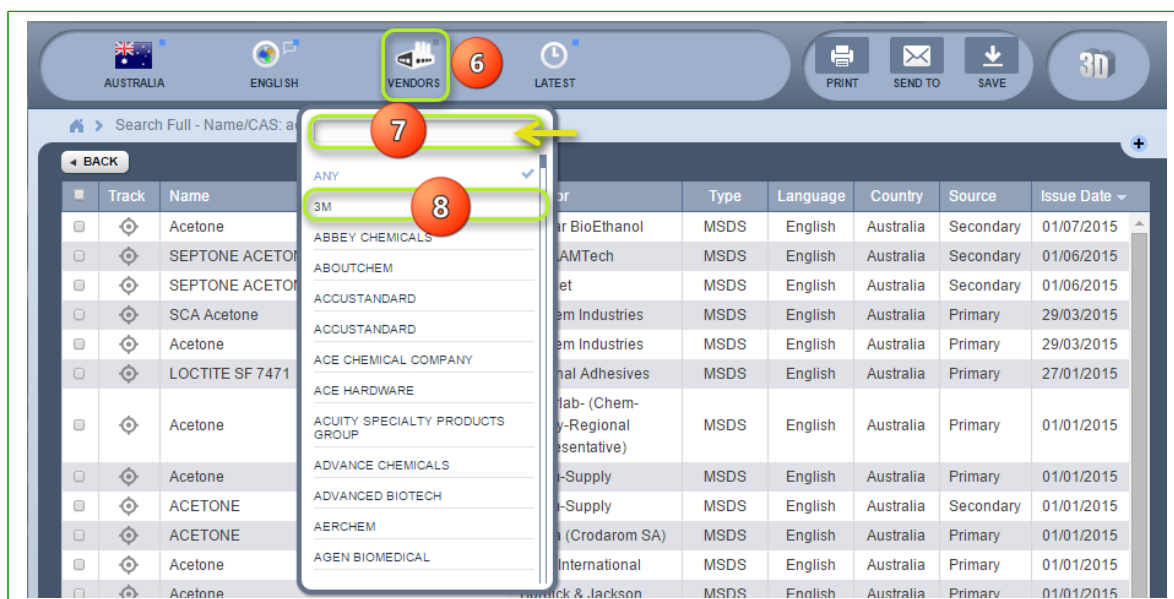Figure: Filtering Document List by Vendor (M)SDS

Figure: Filtered Document List by Vendor (M)SDS

If the vendor cannot be found in the database, send a request to customerservice@chemwatch.net or go to the ticketing system to submit a request, ensure to attach the vendor (M)SDS for that particular material and may also specific in the email or ticket description; the folder name where it is to be registered (refer to section 2.4).

2.4 Search by Other Options

A list of search options have been described Section 2.1 table. The sub-sections below illustrate steps on how to search by specific search options such as *CAS No, CW No., Risk Code* and *DGC* (Dangerous Goods Class).

2.4.1 Search by CAS Number

Steps: Search by CAS (Chemical Abstract Substance) **Number**

1. Select **"Home"** module button 🏠

2. Select **"Vendor (M)SDS"** button Vendor MSDS within the (M)SDS and Labels panel

3. Press the **"Full"** database option ○ Full within the search panel.

You may search from "Own" ○ Own inventory and if material exist, exact match(es) will be displayed in a list. Note that, each material name may be linked to many suppliers if the search criteria did not include the vendor name in your search criteria.

4. Select "**Name/CAS icon**" ⊕ Name/CAS in the search pane header, click on **CAS No** from the drop down list panel

Figure: Search by CAS No
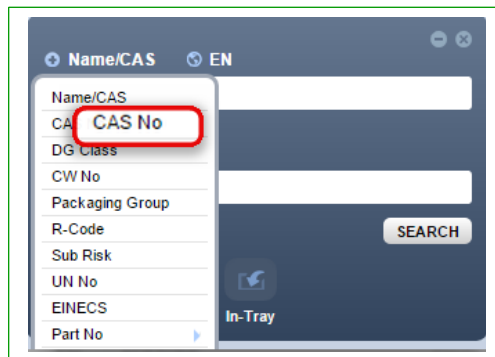
5. Enter the **"CAS number"** for the material, for example; 67-64-1

6. Press the **"Search"** button SEARCH from the search panel

7. Click on the *document name* within the list to display available (M)SDS [if more than one (M)SDS, then choose the applicable (M)SDS from the document list]

Figure: Search by CAS No to find an (M)SDS
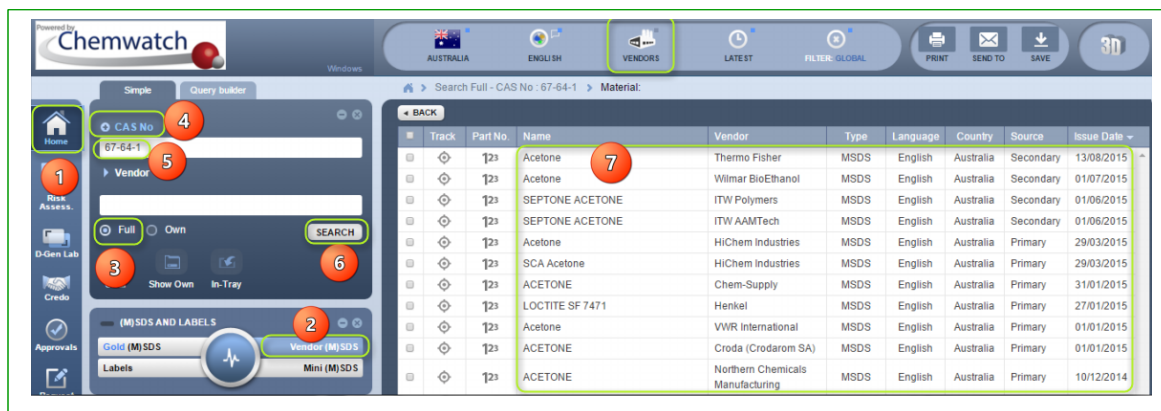
2.4.2   Search by Chemwatch Number

Steps: Search by CW No (Chemwatch Number)

1. Select **"Home"** module button 🏠

2. Select **"Vendor (M)SDS"** button Vendor MSDS within the (M)SDS and Labels panel

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3. Press the **"Full"** database radio button ⊙ Full within the search panel to direct the search path to the full database collection

You may search from *"Own"* ○ Own inventory and if material exist, exact matches display in the list. Note that, each material name may be linked to many suppliers if the search criteria did not include the vendor name in the search criteria.

4. Select "**Name/CAS icon**" ⊕ Name/CAS in the search pane header, click on **"CW No"** from the drop down list panel

Figure: Search by CW No
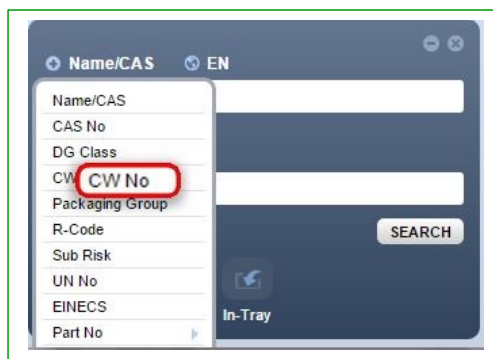
5. Type the **"CW number"** for the material, for example; 1090
6. Press the **"Search"** button SEARCH from the search panel
7. Click on the *document name* within the list to display available (M)SDS [if more than one (M)SDS, then choose the applicable (M)SDS from the document list]

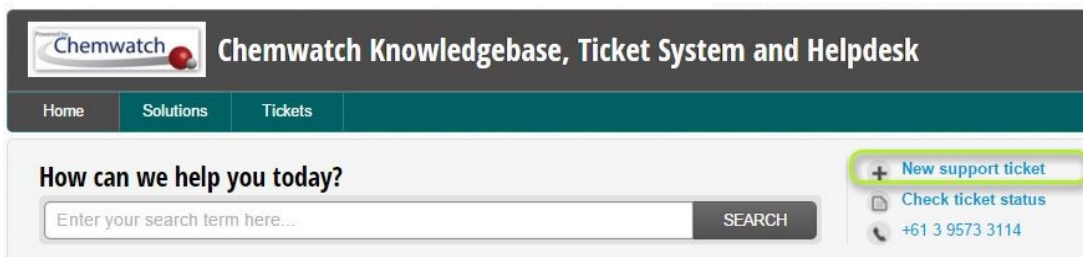Figure: Search by CW No to find an (M)SDS

2.5 Submitting a Ticket

A ticket is used for submitting an issue, a bug, a question, troubleshooting request, feature request or a test; in order to have a tracking number pertaining to a particular inquiry or issue. Note that for any chat conversation conducted, a transcript is created as a ticket number [ticket#] in the ticketing system for a suitable solution or a resolve. Any chat conversation that does not require follow up, the requester will receive a notification by email when the ticket gets closed.
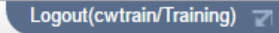
Steps: Submitting a ticket inquiry

1. Login into the ticketing portal by clicking on the web address link below
   Ticketing system web address or type full address as shown
   https://chemwatchhelpdesk.freshdesk.com/helpdesk/tickets
2. Select the Tickets Tab   `Tickets`
3. Select **"New support ticket"** link on the top right hand corner of the interface

Figure: Helpdesk Knowledgebase and Ticketing system Portal

Ticket Information Required

Ticket Details	Description of the Issue or Problem
1. Login	Provide the login details. User login is shown in the top right hand side Logout Link of the user interface Logout(cwtrain/Training)
2. Issue (descriptive content)	Describe in full all the steps carried it to arrive to the problem for troubleshooting the exact issue experienced. This is extremely important to help us identify the exact scenario of the problem. Recommendation Include screenshots or images of the error, problem or issue identified

4. **Enter ticket information** into the ticket form field properties

Note that any tickets will be re-assigned to a particular department for follow up action until the issue is resolved. The ticketing system's user must ensure to sign up prior to logging in to the ticketing system to track each ticket status update. However, note that when the ticket is updated, an email shall be sent to ticket initiator's email address inbox. Chemwatch agent will close the ticket upon confirmation of the fix. When the ticket is closed an email notification shall be sent to the user who initiated the ticket. The Dashboard below illustrates how to fill in the *"ticket properties form fields"* before submitting an issue or inquiry or question.

Figure 27: Helpdesk Knowledgebase and Ticketing Form Fields

The knowledgebase interface contains a number of elements, namely, dashboard, search field, new ticket creation/status panel and the body of knowledgebase categories and articles. Generally users of the knowledgebase will have to use their user login details; email address (legitimate company address) and a password. New user will be required to sign up and then activation email sent to their inbox for authorization purposes. The dashboard image and table

below provide an overly description of the ticketing system's user interface with respective elements.
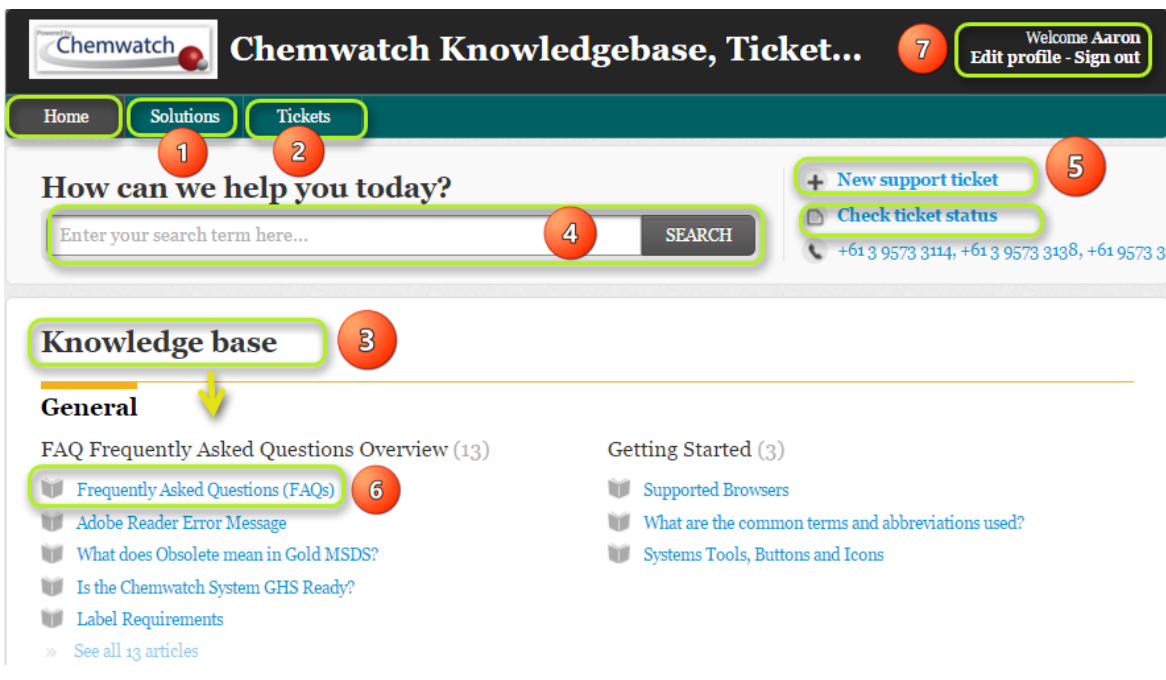

Table: Knowledgebase and Tickets Tabs

No	User Interface	Description
Home Tab		Displays the knowledgebase and ticketing user interface dashboard.
1	**Solutions Tab**	Select the solution tabs to access the knowledgebase categories and articles for help reference
2	**Tickets Tab**	Select the tickets tab to view current tickets relevant to customer (user). Note that these are the tickets created or submitted by customer through chats, telephone or possibly email as complaints.
3	**Knowledgebase (KB)**	The knowledgebase contain frequently asked questions and solutions to common questions. These articles are categorized into specific themes such as searching the database, reports, modules/packages and general IT related articles.
4	**Search Field**	The search field allows users to search for related articles to find knowledge about the specific content or help on how to use the system.
5	**Tickets Panel**	The tickets panel offers a customer to create a new ticket or check the status of an existing ticket relevant to that customer. The customer can only view their own submitted tickets.
6	Listed article	View article details by clicking on the article link from the knowledgebase.
7	Logout	Select the logout link on the top right corner of the KB user interface. Recommended to save web address of the KB and helpdesk portal into your favorites tabs or bookmark the address/page

3   Managing Folders

Folder management in GoldFFX will focus on the Manifest directory, which is a system's directory that allows users with edit rights to create or edit folders/stores based on a site map. Note that the Manifest directory cannot be removed or edited but users with read-write permission can create subfolders to this directory. The default directories in the Folder Panel are described in the table below.

Table: System's Folder Panel directory and descriptions

Directory	Description	Use
Collection	Entire collection of the custom inventory	Materials register of your company's own inventory records since inception that is registered with Chemwatch.
Enterprise	Parent system' directory to sub-directories; folders, manifest, deleted	Inventory record of materials including archived and current register of materials in folders, manifest and deleted directories.
Folders	System's directory for materials in unfiled folder and other users' folders	Contains current register of materials in folders. Commonly used for managing a list of materials for vendor (M)SDS for various purposes.
Unfiled	System's directory for materials that are archive as newly added	Materials requested to be added into the database from a company will be registered into the unfiled folder in order to be filed later into a specific folder or location.
Manifest	System's directory that can represent a site map for a company by using folder structure	Manifest tree can be used to create areas, sections, locations by using a folder structure based on manifest site map to keep records/register of materials kept on sites/locations.
Deleted	System's directory that stores all deleted folders and materials	Recycle bin for all removed folders and its contents or materials deleted in the system. Not all users may have access to this folder due to permission rights to edit or not to edit this folder or other folders.

Folder Permissions applicable in the GoldFFX System

There are four folder permission attributes that a single may have as assigned by the administrator of the program. The table below provides summary description for these permissions with respect to editing folder content.

Table: Folder Permission Descriptions

Permission	Description	User Interface Attribute
Deny	Directories/folder content cannot be accessed by users	A message displays "to contact the administrator"
Not Defined	Directories/folder will not be visible to user	Folder assigned this type of permission will be hidden from user
Read	Directories/folder content can be accessed by user but cannot add or copy or move or remove (delete) materials	User can view folder content (register of materials) but cannot edit content
Read-write	Directories/folder can be copy, move, remove (delete) materials, edit material quantities	User can view folder content (register of materials) and edit content

3.1   Creating and Editing Folders

The Folder panel has a "*Mouse Right Click* 🖱 " Functionality that allows users with folder permission to be able to create a folder, copy a folder, move a folder, remove a folder, rename and paste options. Folder management is applicable to users who have been granted permission to edit the Folder Structure. The manifest directory node contains a mouse right click functionality on the parent directory or subsidiary folders which will only allow a user to create/paste folders.

"Mouse Right Click" functionality on MANIFEST Directory

🖱 The "**Mouse Right Click**" will display the "Create" option if the user is permitted to create **Sites/Areas, Sections, Locations** based on business or institution site map. Note that some users may not be granted permission to create parent sites folders but may be allow to create subsidiary

Figure: Create folder
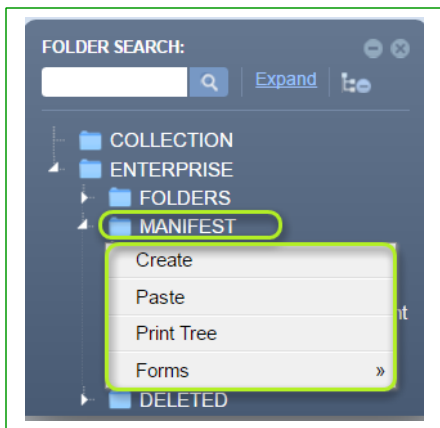
"Mouse Right Click" functionality on MANIFEST Directory

The "**Mouse Right Click**" will display the "Create/Edit" menu options if the user is permitted to create "***Areas, Sections, Locations***" based on business or institution site map. Note that some users may not be granted permission to create parent sites folders but may be allow to create subsidiary departmental or location (stores) folders). A Manifest directory's subsidiary folder will have more options provided the user is granted rea-write permission by the administrator of the system.

However, if a subsidiary folder exists within the parent directory "**MANIFEST**", and the user already has been granted read/write permission to that folder under that parent directory, then that user will have more options to edit own folders as shown below.

Figure: Folder mouse right menu
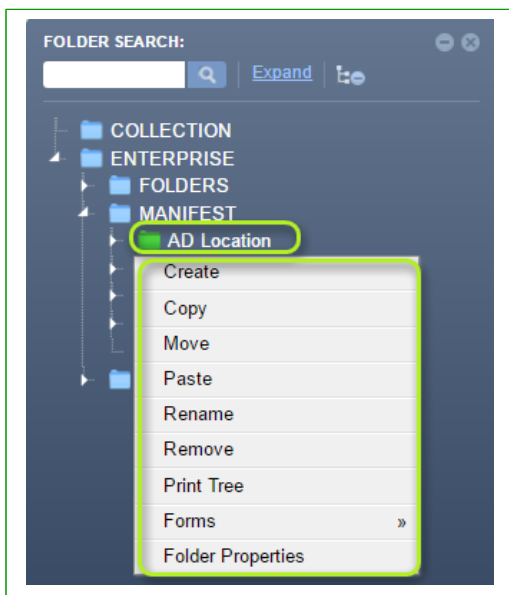
3.1.1   Creating Folders

The folder structure contains folder attributes when creating a folder that allows users with read-write permission to be able to assig folder properties. The table below provides a summary description of the folder types.

Figure: Folder Type icons for Administrator Folder
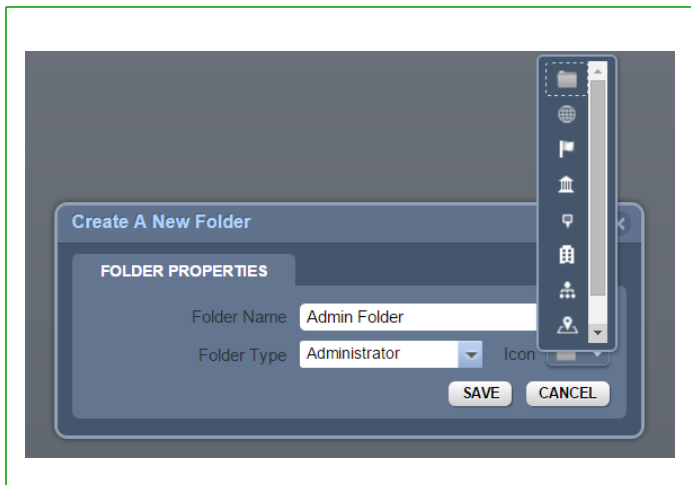
Table: Administrative Folder Types

Folder Type	Folder Icon	Folder Property	Folder Description
Administrator		Grey	Administrator folder

> **Note: Administrator Folder Icons**
>
> 📁 Administrator Folder
>
> The "**Administrator Folder**" is designated as a parent administrative folder, which greyed out. This means any user cannot add or edit content in this type of folder. User granted permission at this folder level, is provided various folder icon options to reflect the type of administrator folder in context of the business jurisdiction.

Region		Global	Regional folder
Country		Flag	Designates the folder as a country

Building		Building	Designates the folder as a building
Area		Area	Designates the folder as an area
Department		Department	Designates the folder as a department
Room		Storage Room	Designates the folder as storage room
Site		Site	Designates a site or location

Figure: Folder Type icons for Storage
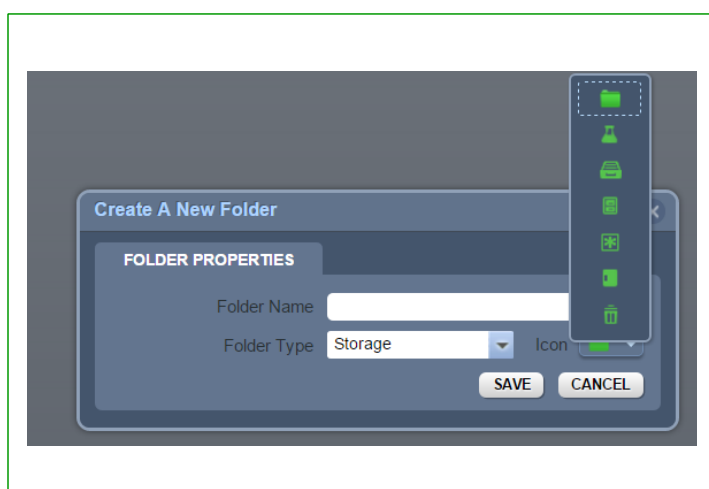
Note: Storage Folder

 Storage

The "**Storage Folder Type**" is a green folder that can be designated as a *"Laboratory folder, Storage units, Cabinets, Fridge, Freezer, Bins, Shelf* "or a general folder. Green color coding means any user can add materials or edit content in this type of folder if the user is granted read-write permission at the folder level.

Table: Storage Folder Types

Folder Type	Folder Icon	Folder Property	Folder Description
Storage		Storage	Storage folder designated as a default green folder
Laboratory		Green	Storage folder designated as laboratory container

Shelf		*Green*	Shelf folder
Cabinets		*Green*	Cabinet folder
Cold storage		*Green*	Cold storage folder
General storage		*Green*	General folder
Waste storage		*Green*	Waste or recycle bin

To create an "**Administrator**" folder, follow the steps below.

Steps: **Creating an Administrator Folder**

1. Select the **"Home"** module button
2. **Mouse right click** the Folders directory
3. Click the "**Create**" option from the folder context menu
4. Select a Folder type from the drop down arrow list, e.g., **Administrator folder**
5. Select a folder icon from the drop down arrow list to assign the folder type, e.g., gray icon
6. Type the "**name of the folder**" in the folder name text field
7. Click the **"Save"** button SAVE and a message (with a tick ✔) shall display on the top middle of the user interface that confirms the successful completion of the action undertaken.

Figure: Folder mouse right click create and save

A confirmation message displays on the top middle of the user interface that confirms the transaction being completed (with a tick).

Note: Administrator Folder

The Administrator (gray) Folder is designated as a *"Region, Country, State, Site, Building, Department, Area or Room".* Materials cannot be added to this type of folder unless it is a green folder. In this case, materials can be added to a storage folder.

To create a "**Storage**" folder, follow the simple steps below.

Steps: Create a Storage folder

1. Select the "**Home**" module button
2. **Mouse right click** the folder name (parent folder) to add a subsidiary folder
3. Click the "**Create**" option `Create` from the task menu
4. Select a **"Folder type"** from the drop down arrow list, e.g., administrative folder
5. Select a **"folder icon"** from the drop down arrow list to assign folder type, e.g., "**Storage**"
6. Type the "**name of the folder**" in the folder name text field, e.g. Storage
7. Click the **"Save"** button `SAVE` and a message (with a tick ✔) shall display on the top middle of the user interface that confirms the successful completion of the action undertaken.
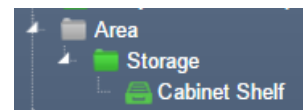
Figure: Folder mouse right click create and save

Note: Storage Folder

A Storage (green) folder is designated as a storage or room. Materials can be added to this type of folder unless the user is not granted read-write permission. A user with read permission will be able view the folder and content. Subsequently, subsidiary folders can be created under a storage type of folder based on the number levels on the specific site map. Generally, a basic 3 levels' manifest site map may resemble an "*Area, Storage and a Cabinet Shelf*".

A confirmation message displays on the top middle of the user interface that confirms the transaction being completed (with a tick).

3.1.2   Removing Folders

Removing folders is the same as deleting folders from the Folders directory. All deleted folders are transferred to the "**DELETED**" directory; where the deleted folder(s) are archived with a reference *"date and time of deletion"* for tracking purposes. Removing a folder requires that a user must have read-write permission to that folder. If a user does not have this permission, consult with the administrator of the program to grant the applicable permission to edit or manage folders. If unsure, consult helpdesk@chemwatch.net or simply submit a ticket.
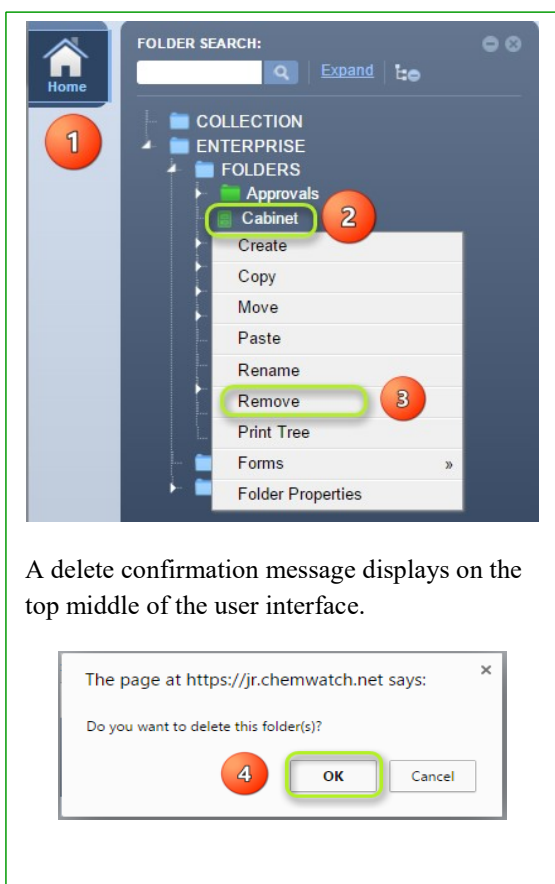
Steps: Remove (Delete) a Folder

1. Select the **"Home"** module button 🏠
2. **Mouse right click** on the folder to be deleted
3. Click the "**Remove**" option from the task menu
4. Select the "**name of the folder**" in the add panel text field
5. Click the ⬜ OK button to confirm delete.

Figure: Folder mouse right click Remove

A delete confirmation message displays on the top middle of the user interface.

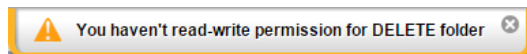

Note: Deleted Directory Folder
The "**Deleted**" Directory Folder serves as an archive folder where all deleted folders are stored. Deleted folders may also be further removed (deleted) by requesting Chemwatch IT department or helpdesk by submitting a ticket in order to be actioned and also keep a formal request by the system's administrator. Note that the date format assigned to deleted folder is *"dd/mm/yy"*. Any user (including the administrator or the program)) cannot delete a *"deleted folder"*. A message will display as follows for this action.
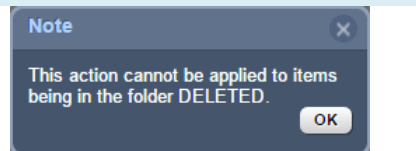
Content of a deleted folder can be viewed by clicking on the folder under the deleted directory to view its content (materials list).
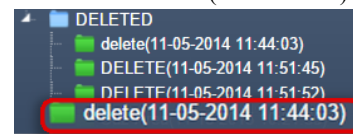
Note that users that do not have read-write permission will get the appropriate message as shown below.

⚠ You haven't read-write permission for DELETE folder ⊗

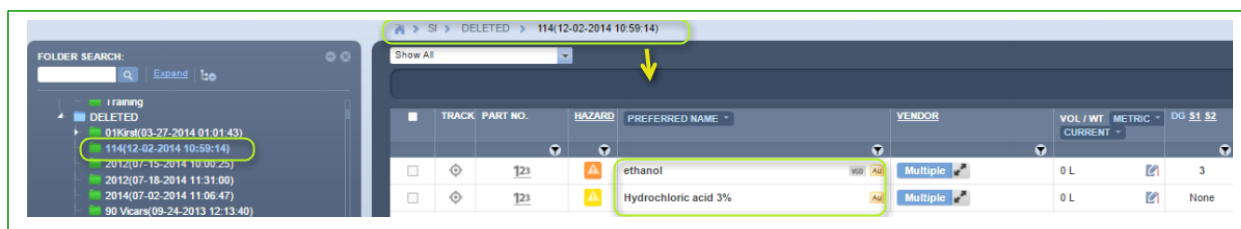Users with read-write permission will see the successful completion of the transaction.

Selecting expand (arrow) icon ▶ for the deleted directory; will list all the deleted folders tagged with the "*date and time*" stamp in brackets as depicted in the image below.

Figure 34: Deleted folder, date/time stamp, viewing folder content

3.1.3   Rename a Folder

Renaming a folder is defined as changing the name of an already existing folder. To assign a new name to an existing folder, follow the steps below.

Steps: Rename a folder

1. Select the **"Home"** module button 🏠
2. **Mouse right click** the folder to be renamed
3. Click the "**Rename**" option from the task menu
4. Type the "**new name of the folder**" in the folder text field
5. Click on folder pane "**empty space**" to save the new folder name

Note: User Folder Permission

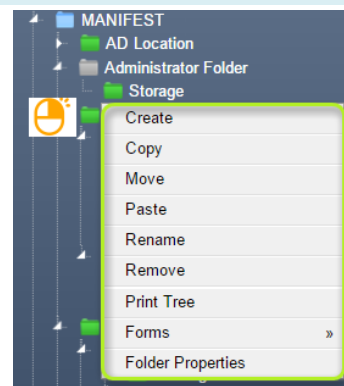Users granted permission to read-write will be able to select edit options from the contextual mouse right click menu.
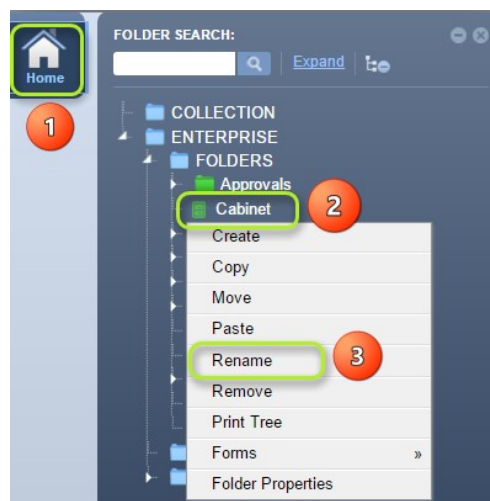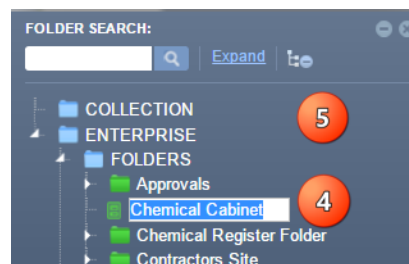
Figure: Folder mouse right Rename

Figure: Rename a folder

3.1.4   Copy a Folder

"Copying a single folder" is defined as copying a parent folder (which contains sub-folders) or an individual folder (which does not have any child folders). Copying a folder has an attribute to a user's read/write permission or privilege; provided by the administrator of the program within your business or institution. Users with read only permission cannot copy folders but can view the folder structure and folder content register. The following steps illustrate 'how to copy a single folder into another'.
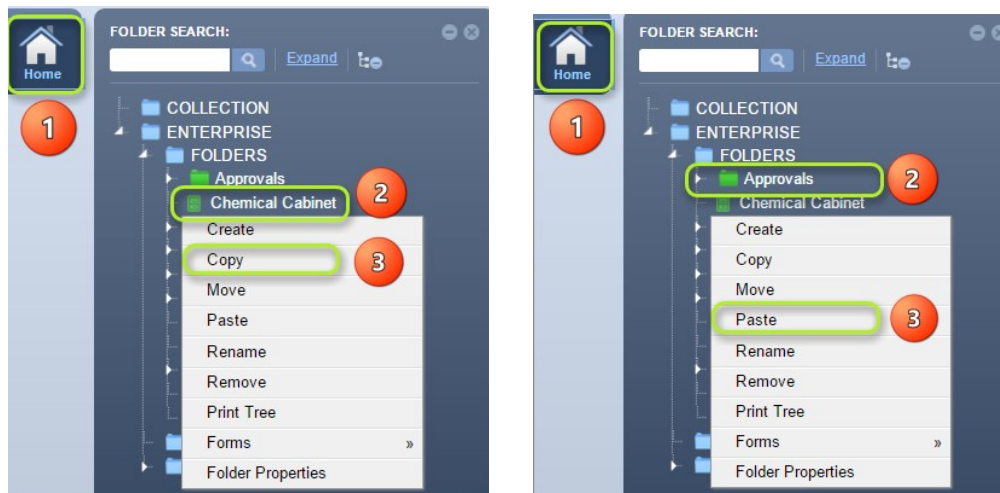
Steps: Copy a folder

1. Select the "**Home**" module button 🏠
2. 🖱 **Mouse right click** the folder to be copied
3. Select "**Copy**" option from the folder context menu
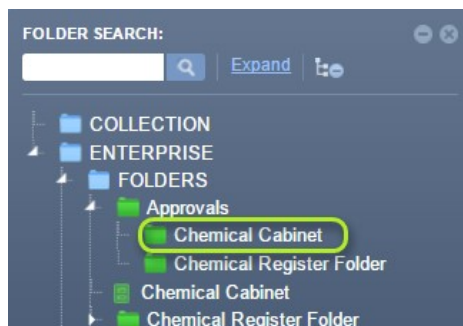4. 🖱 **Mouse right click** on another folder

    Note: A copied folder cannot be pasted on the same directory as the folder name already exists.
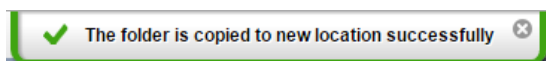5. Click "**Paste**" option

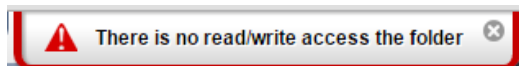Figure: Folder copy and paste

The copied folder will be added as a child folder.

A will message display to confirm successful transaction as shown below.

If a user does not have read/write access to the folder, a message will display status of the task enabling the user to seek further help from the administrator of the program.

3.1.5 Copy Multiple Folders

Renaming a folder is defined as changing the name of an already existing folder. To assign a new name to an existing folder, follow the steps below.

Steps:

1. Select the **"Home"** module button 🏠
2. Press "**CTRL key"** and hold it down

Figure: Folder CTRL key and copy
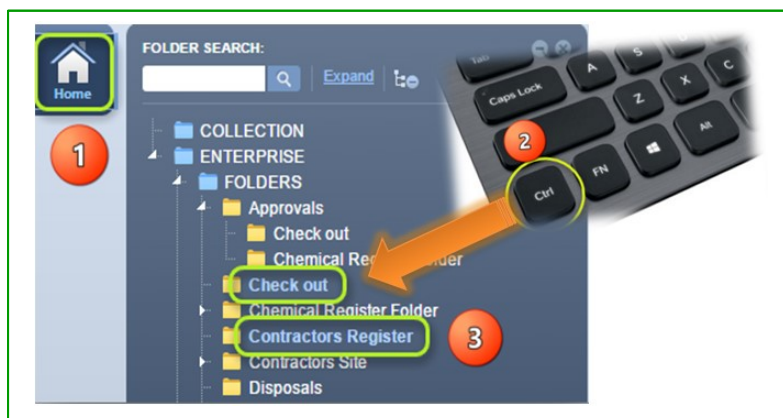
3. Click the "**folder names**" to copy multiple folders
4. 🖱 **Mouse right click** on one of the selected folders

   Note: The selected folders will change colour depending on the user interface theme colour; for example, light blue theme will change folder name text colour from white to light blue.

Figure: Folder mouse right click copy and paste
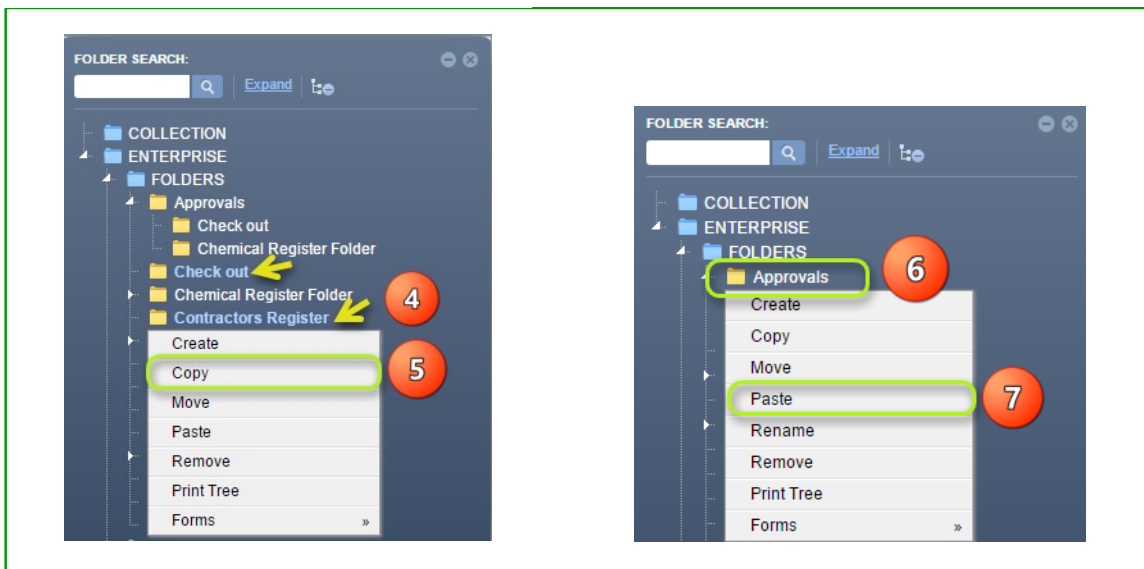
5. Click "**Copy**" from the folder context menu
6. 🖱 **Mouse right click** on intended destination folder
7. Select the "**Paste**" option

The copied folder will be added as a child folder.

Figures 40: Mouse right click and paste folder

A will message display to confirm successful transaction as shown below.
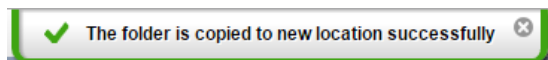
If a user does not have read/write access to the folder, a message will display status of the task enabling the user to seek further help from the administrator of the program.
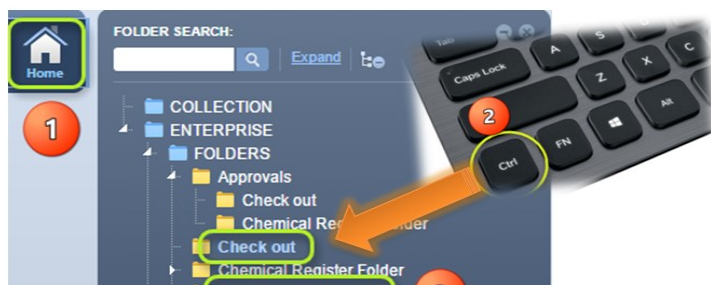
3.1.6   Move a Folder

"Moving a folder" is defined as relocating a folder from current position in the tree structure into another location within the same folder directory or across directories or a different directory or the name of an already existing folder. To assign a new name to an existing folder, follow the steps below.
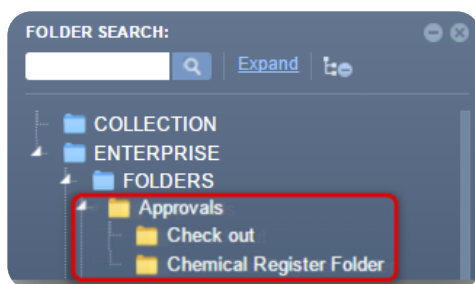
Steps

1. Select the **"Home"** module button 🏠
2. 🖱 **Mouse right click** the folder to be moved
3. Select the "**Move**" option from the folder context menu
4. 🖱 **Mouse right click** the **destination folder** 📁
5. Select the "**Paste**" option from the folder task menu

Figures: Mouse right click move and paste folder

Confirm folder in the new position by expanding the parent folder.

3.1.7 Move Multiple Folders

"Renaming a folder" is defined as changing the name of an already existing folder. To assign a new name to an existing folder, follow the steps below.

Steps

1. Select the **"Home"** module button 🏠
2. **Click and hold CTRL key down** Ctrl on the keyboard and then directly click on each folder to be moved and release CTRL key. Notice colour changes when folder(s) are selected
3. 🖱 **Mouse right click** on one of the selected folders and select **move** option the task menu
4. 🖱 **Mouse right click** the **destination folder** 📁
5. Select the "**Paste**" option from the task menu

Figures: Mouse right click and paste multiple folders

3.1.8 Print Tree (Folder Structure)

Renaming a folder is defined as changing the name of an already existing folder. To assign a new name to an existing folder, follow the steps below.

Steps

1. Select the **"Home"** module button 🏠
2. Click the **"Expand"** link in the folder panel header

Figures: Expand Folder Tree Structure

Note: Collapse View

Collapse Folder structure displays the parent directory "Collection/Enterprise".
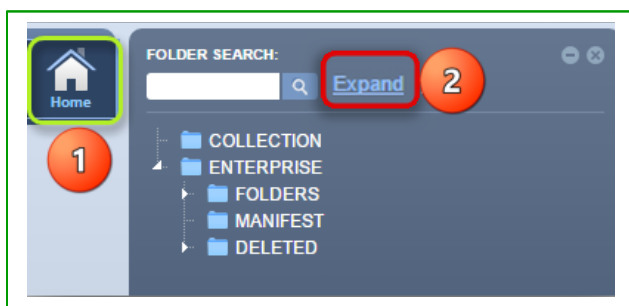
3. 🖱 **Mouse right click** the folder to list task options
4. Click the "**Print Tree**" option from the folder context menu

Figures: Print Folder Tree Structure
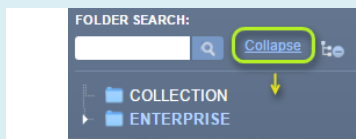
Note: Print Enterprise Folder Structure

Expand Tree structure and print folder site map for the entire "Enterprise".

To print a specific folder or Site/Area, expand that parent folder and mouse right click on it and print tree. This action will print the specifically selected parent folder structure depending on the tier levels.

5. Use the "**pdf reader print or save icons**" to print or save reports
6. Check if the report contains "***Date and print time***", "***Account and User Login Name***"
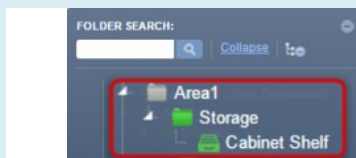
Figures: Enterprise Folder Tree Structure in PDF format
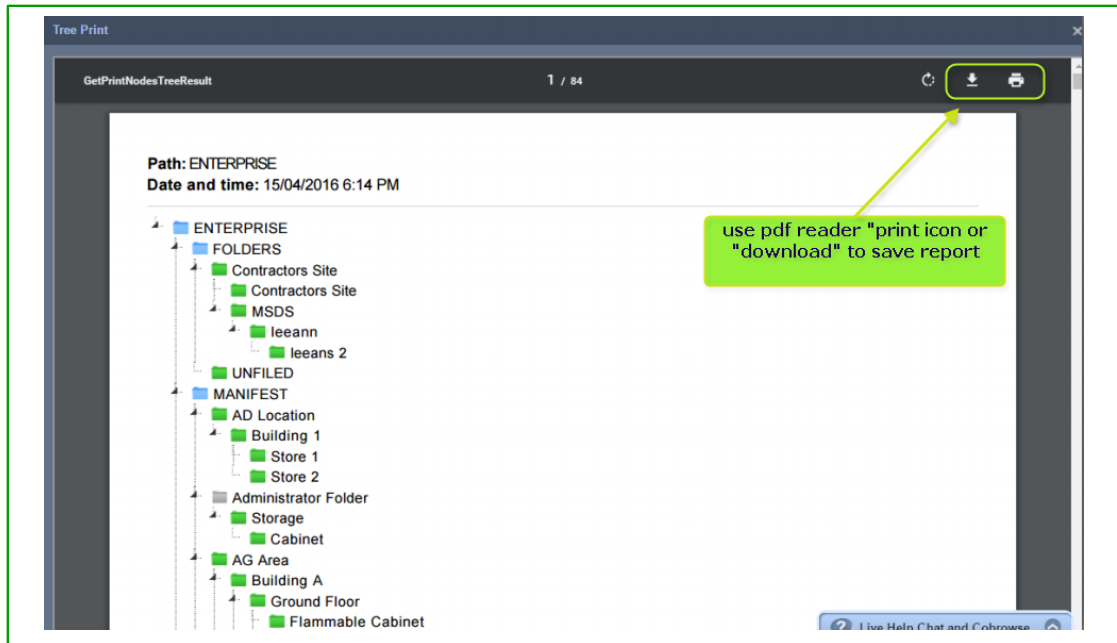
Figures: Tier Level Folder Tree Structure in PDF format
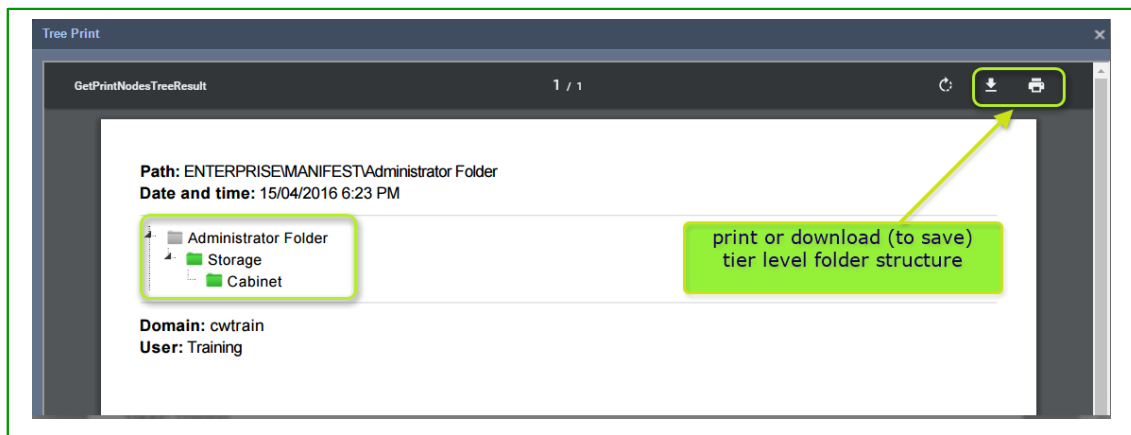
4   Distributing Materials

This topic covers aspects on how to distribute materials across the folder structure. Distributing materials is described as "*copying, moving or remove single or multiple materials*". The following exercises relevant for users that have been granted read and write permission to folders and many not necessary have rights to manage folders but manage the content within specific folders or materials within the entire folder structure. If read only permission has been granted to a user, then that type of user profile will not be able to distribute materials within the specified folders, but may be granted rights to certain folders.

4.1   The Shown List

The Search panel contains a button called **"Show Own"**, and when selected; it will load a list of your own company's "*inventory list*" of materials registered in the Chemwatch database. This type of list is referred to as your *"Own"* list.
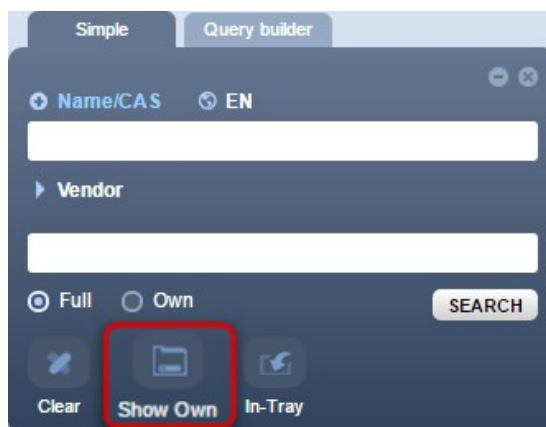
Steps: Display Own Inventory List

1. Select the **"Home"** module button
2. Select the **"Show Own"** button in the Search panel
3. Own list of materials display on the materials table

A list of available inventory displays. Refer to the column description table for the materials grid

Figures: Display OWN "Inventory" list
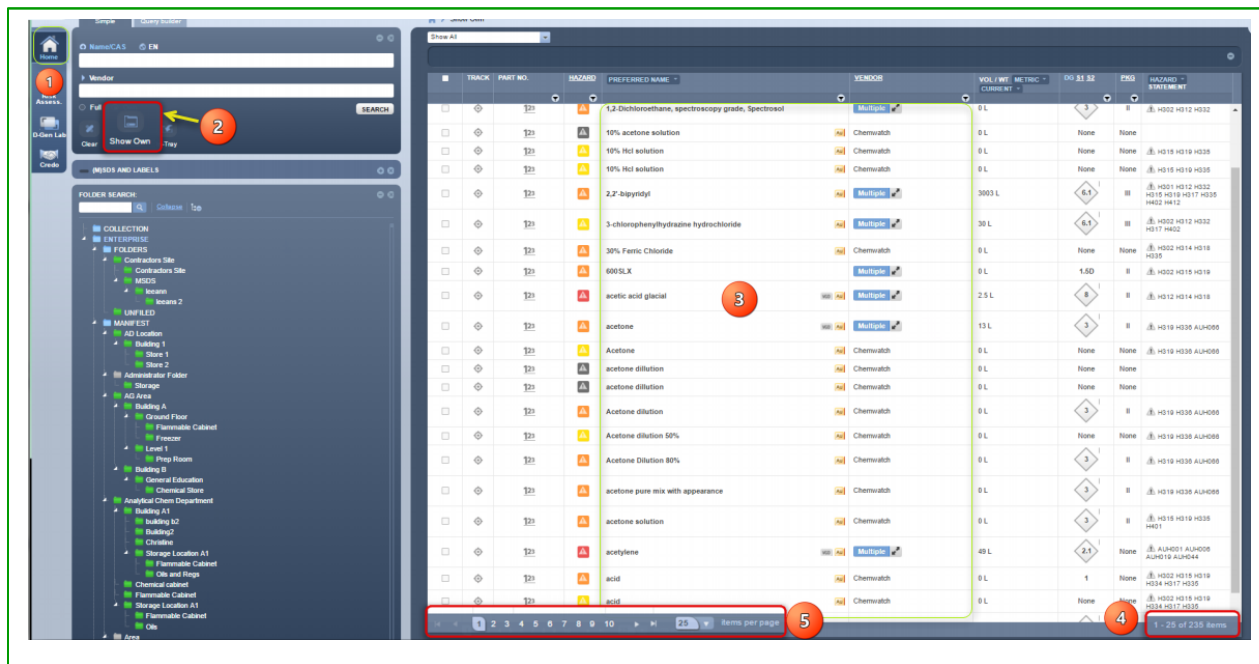
4. Scroll through the pagination (page numbers) to view list of material in that page based on the minimum of *"25 materials per page"*.
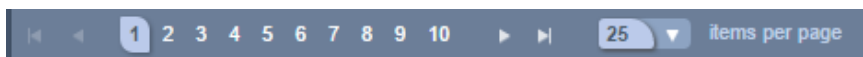
5. The page display will show the number string based on the set number of materials per page, in this case, 25 materials per page have been set by default [*1-25 of total number of items*] in "Show Own" list.
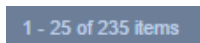
4.2   Copy a Material

Copying material in a folder requires that folder/store to have materials available in that folder and permitted to *"copy/paste"* them into the destination folder. If a user does not have *"read and write"* permission to the destination folder, then this action will not be allowed. A message will display to contact your Chemwatch administrator to grant the specific folder rights. The steps below illustrate "*how to copy a material from one folder to another*" for a user with applicable folder permissions.

Steps: Copy a single material

1. Select the "**Home**" module
2. Select "**Vendor**" (M)SDS" button
3. Select a manifest **folder (store)** to display a list (register of materials)

4. Click on **checkbox**(es) ☐ alongside the material name in the materials table

5. 🖱 **Mouse right click** on material name

6. Select "**Copy**" option from the folder task menu

7. 🖱 **Mouse right click** on destination folder 📁

   Note: A material may have multiple Vendor (M)SDS, in such a scenario; a choice will have to be made to copy the exact single or multiple Vendor (M)SDS. In this case, only a single material will be copied from a folder into another.

8. Click "**Paste**" option

Figures: Copy single material
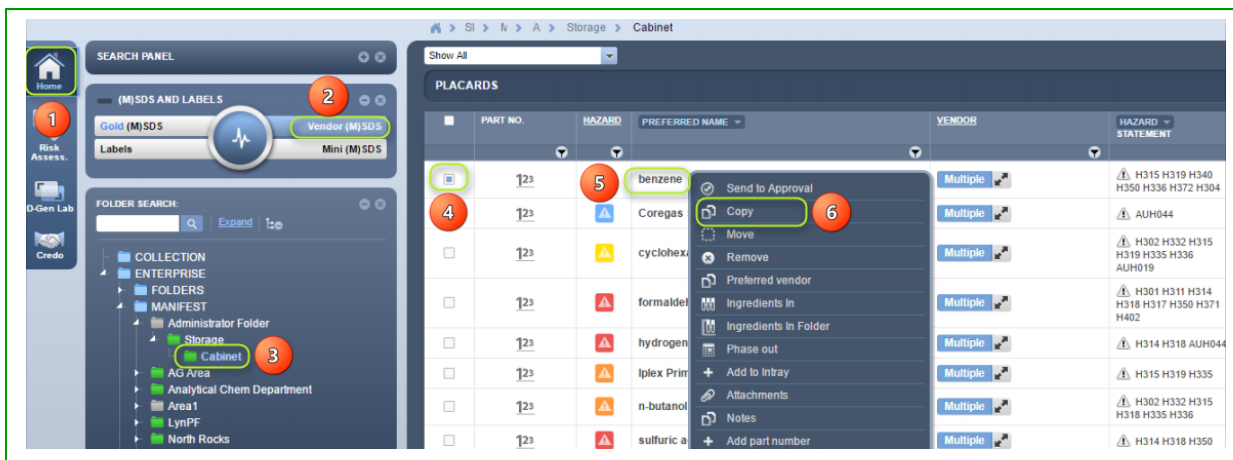
Figures: Paste single material into folder
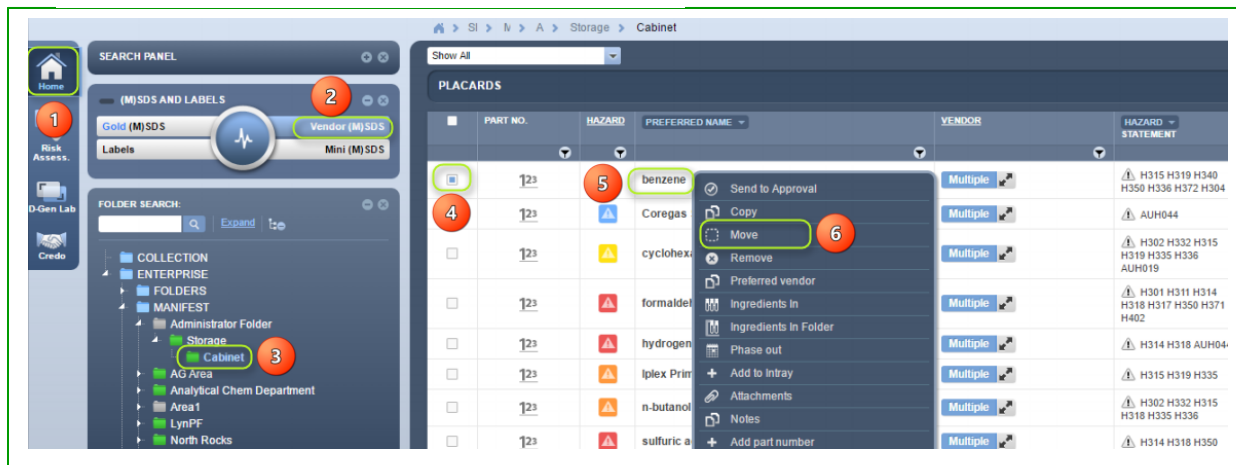
4.3 Move a Material

Moving a material in a folder requires a folder to have materials available and permitted to paste them into the respective destination folder. If a user does not have read and write to the destination, contact your Chemwatch administrator to grant the specific folder rights. The steps below illustrate how to move a material from one folder to another.

Steps: Move a single material from a folder

1. Select the "**Home**" module button 🏠
2. Select "**Vendor**" (M)SDS" button [Vendor (M)SDS]
3. Select a **folder name** 📁 to display a list (register of materials)
4. Click on **checkbox**(es) ☐ alongside the material name(s) in the list
5. **Mouse right click** on material name
6. Select "**Move**" option from the folder context menu
7. 🖱 Mouse **right click** on destination folder 📁
   a. *Note: A material may have multiple Vendor (M)SDS, in such a scenario; a choice will have to be made to move the exact single or multiple Vendor (M)SDS. In this case, only a single material will be moved from a folder into another.*
8. Click "**Paste**" option

Figures: Move a single material from a folder

Figures: Paste single material into folder

4.4 Remove (Delete) a Material

"Moving a material from a folder" requires a folder to have materials available and permitted to paste them into the respective destination folder. If a user does not have read and write to the destination, contact your Chemwatch administrator to grant the specific folder rights. The steps below illustrate how to move a material from one folder to another.
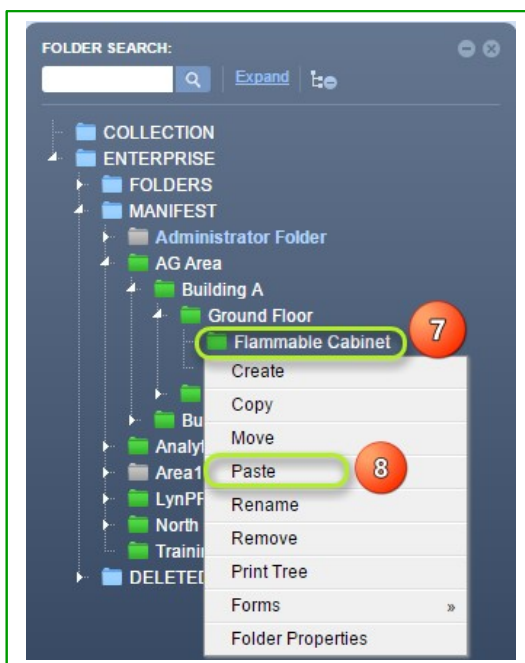
Steps: Remove a material from a folder

1. Select the "**Home**" module button 🏠
2. Select "**Vendor**" (M)SDS" button `Vendor (M)SDS`
3. Select a **folder** to display a list (register of materials) 📁
4. Click on **checkbox**(es) alongside the material name in the list
5. 🖱 **Mouse right click** on material name
6. Select "**Remove**" option from the folder context menu
   a. *Note: When a material is removed from a folder, all Vendor (M)SDS for that material will also be removed from that particular folder. All deleted materials are archived in the "Deleted directory".*
7. Click "Yes" button to accept deletion of the number of chemicals selected

Figures: Remove a single material from a folder
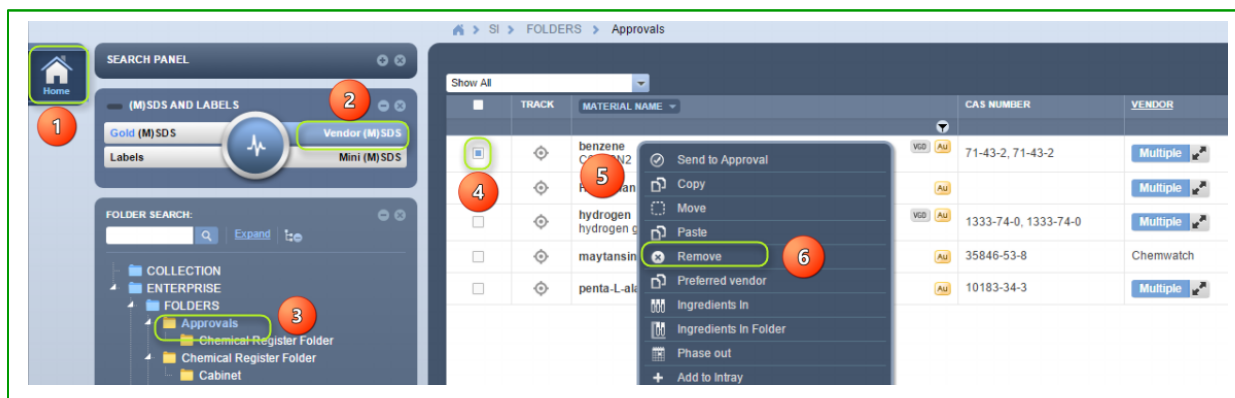
Figures: Confirm the removal of a single material
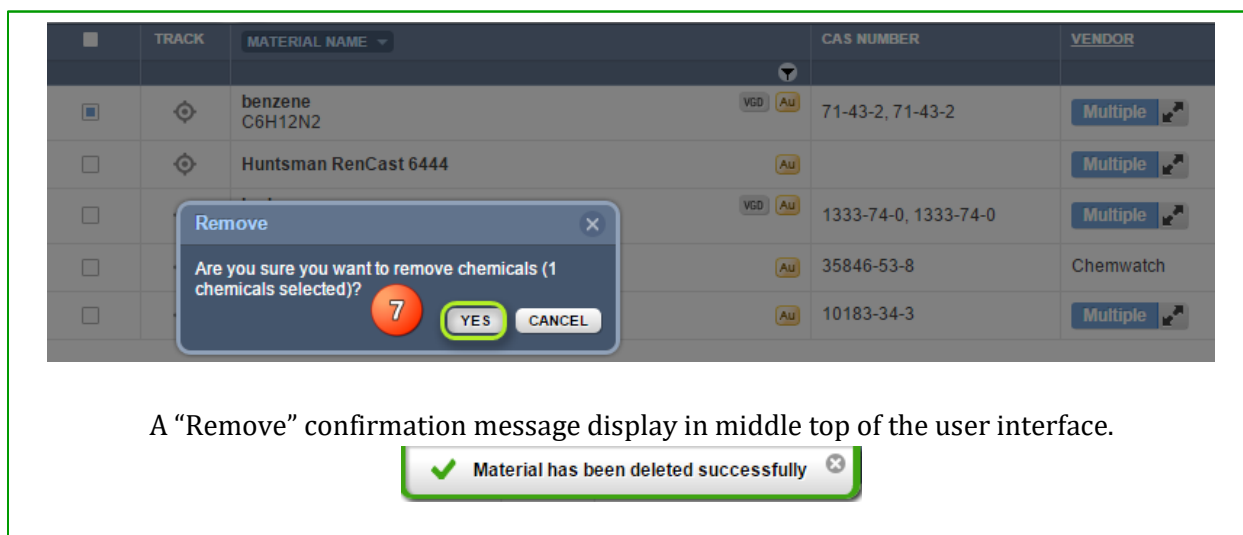
A "Remove" confirmation message display in middle top of the user interface.

4.5 Expand Material Row to View Vendor (M)SDS Listed

The term *"Multiple"* in the materials list table means that; there are *"more than one (M)SDSs"* available for that material. **Multiple (M)SDSs can be Vendor (M)SDSs (Manufacturer) including a Gold (M)SDS (Chemwatch) or only Vendor (M)SDSs authored by Chemwatch (on behalf of the Vendor)**. To view a list of multiple Vendor (M)SDSs, select the "Multiple" ![Multiple] button to expand the row for that material. To display a specific Vendor (M)SDS for a particular supplier for the scenario where more than one vendor exist in your materials register, select the multiple button and then click the applicable product name alongside the desired vendor document for that particular supplier. Follow the illustrated steps below.

Figures: Multiple Vendor (M)SDS for a single material
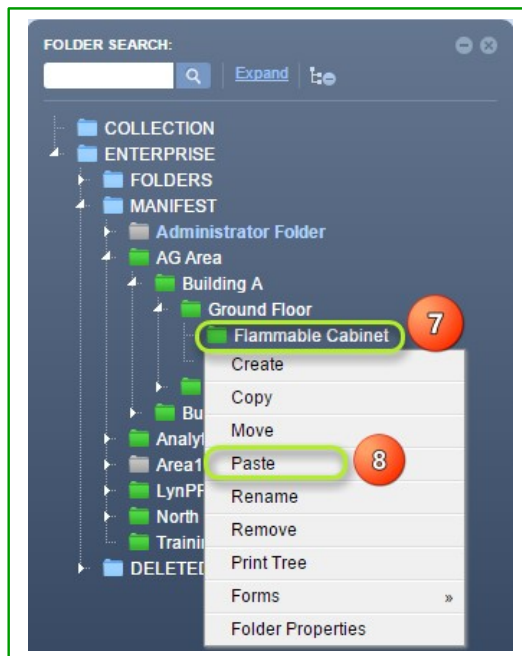

Steps: Expand multiple to list Vendor MSDS

1. Select the "**Home**" module button
2. Select "**Vendor**" (M)SDS" button
3. Select a **folder** to display a list (register of materials)
4. Click on "multiple" button to expand material's row
5. Click on the product name alongside the vendor name to display vendor document

Figures: Multiple Vendor (M)SDS for a single material

6. A document list display record in the documents table showing *"language, country, issue date and the name of the product"*. Select the document name to display the full Vendor (M)SDS.

Figure: Display Vendor (M)SDS for a single material in Document List Table

Figure: Display the Full Vendor (M)SDS document for a single material

5   Printing, Saving and Emailing Reports

The following menus have been set up for the document type of template for Labels, Mini (M)SDS, Gold (M)SDS, whereas the Vendor (M)SDS will maintain the acrobat pdf format when its generated in a batch file.
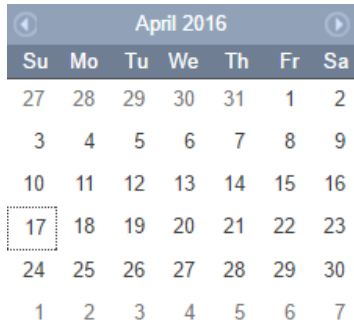
The Print Menu Description

🖨 The Print Menu	Print Menu Option	Description
	List	Prints the list of materials as per the column headers for the current page
	(M)SDS/Gold	Prints the selected materials Gold (M)SDS
	(M)SDS/Mini	Prints the selected materials Mini (M)SDS
	(M)SDS/Vendor	Prints the selected materials Vendor (M)SDS
	Labels	Prints the selected materials Labels
	Selected	Only applies the selected materials on the materials table
	All	Prints all materials in the page
	Update/New/Updated	Prints the selected materials based on the "Newly/Updated" option
	Date Range	Prints the selected materials based on the "specific date range" set through the calendar icon 🗓 ; '*from date and to date'*.
	Calendar/From	
	Calendar/To	

The Save Menu Description

The Save Menu	Save Menu Options	Description
	List/HTML	Saves the list of materials as per the column headers for the current page as an html (hypertext) format report
	List/PDF	Saves the list of materials as per the column headers for the current page in acrobat pdf format
	External Link HTML/Gold	Saves the Gold MSDS as an html external link for the selected or all materials in the grid's page (materials table)
	External Link HTML/Mini	Saves the Mini MSDS as an html external link for the selected or all materials in the grid's page
	External Link HTML/Labels	Saves the Labels as an html external link for the selected or all materials in the grid's page (materials table)
	External Link HTML/Vendors	Saves the Vendor MSDSs as an html external link for the selected or all materials in the grid's page (materials table)
	All	The action or task will save "ALL" materials in the grid's page (materials table)
	Include Preferred Names/None	Selected materials or all in grid's page (materials table) *Must Not Include* "preferred names" assigned to those materials when save mode is applied
	Include Preferred Names/All	Selected materials or all in grid's page (materials table) *Must Include* "preferred names" assigned to those materials when save mode is applied
	Selected	Only applies the selected materials on the materials table
	All	Saves all materials in the page
	Offline Archive	Saves materials type of report/document as an offline download zip file
	Offline Archive/Gold	Saves materials Gold (M)SDS as an offline download zip file
	Offline Archive/Mini	Saves materials Mini (M)SDS as an offline download zip file
	Offline	Saves materials Vendor (M)SDS as an offline download

	Archive/Vendors	zip file
	Offline Archive/ Selected	Only applies to the selected materials on the materials table for offline archive documents
	Offline Archive/All	Only applies to all the materials on the materials table for offline archive documents
	Offline Archive Store	Saves materials type of report/document as an offline download zip file. The reports/documents that will be saved are; Gold MSDS, Mini MSDS and Labels
	Update/New/Update	Saves the selected materials documents (MSDS/Labels) based on the "Newly/Updated" option
	Update/Date Range	Saves the selected materials (MSDS/Labels) based on the "specific date range" set through the calendar icon ; '*from date and to date*'.

5.1 Batch Print Vendor (M)SDS

This exercise, demonstrates the steps on "how to print multiple Vendor (M)SDSs" into a single batch file in pdf format. This helps to collate all Vendor (M)SDSs for selected materials to keep an archive file for reference as a paper trail.

Steps: Batch print Vendor (M)SDS into a single PDF file

1. Select the "**Home**" module
2. Select "**folder**" name
3. Select **checkboxes** □ for each row in the materials list or click on the checkbox header to mark all materials in the displayed list
4. Click on **"Print"** button to open print menu options
5. Select **(M)SDS** radio button from the print menu

6. Select "**Vendor**" checkbox

7. Click on "**Selected**" radio button or "**All**" for all materials in the list

    a. *Note: If "All" option is selected from the print menu, this option will generated reports for all materials in the list based on the current set pagination (or default); 10, 25, 50, 100, 500 materials per page. Default is always set to 10.*

8. Click the "**Submit**" button to generate the file

Figures: Print Vendor (M)SDS for multiple materials
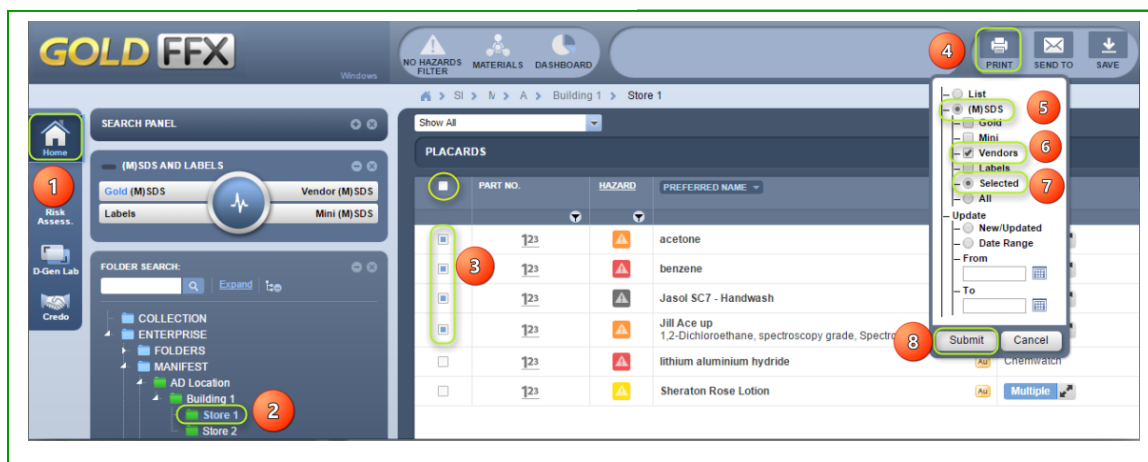
9. Print panel displays processed reports. Select the print icon from the acrobat reader program tools to print all the generated documents.

Figure: Print batched Vendor (M)SDS for the selected materials
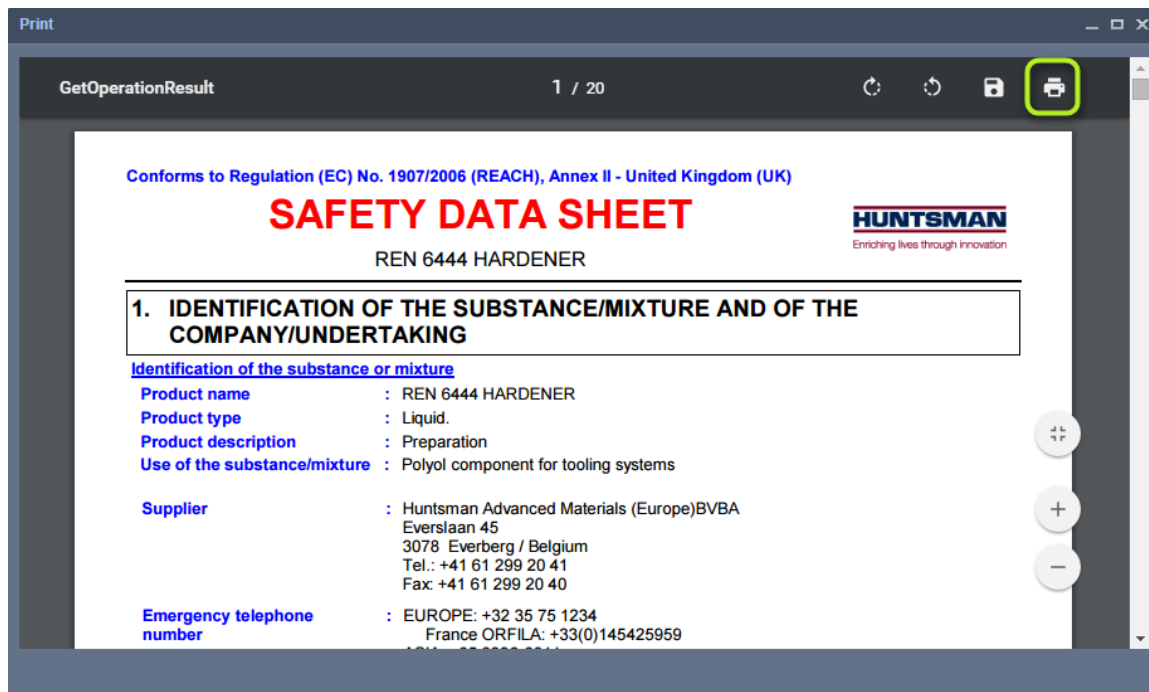
5.2 Save a batch of Vendor (M)SDS

This exercise, demonstrates the steps on "how to save multiple Vendor (M)SDSs" as a single batch file in pdf format. This helps to collate all Vendor (M)SDSs for selected materials to keep an archive file for reference.

Steps: Save a batch of Vendor (M)SDS into PDF file

1. Select the "**Home**" module 🏠
2. Select "**folder**" name 📁
3. Select **checkboxes** ☐ for each row in the materials list or click on the checkbox header to mark all materials in the displayed list
4. Click on **"Save"** button to open print menu options
5. Select **(M)SDS** radio button from the print menu
6. Select "**Vendor**" checkbox
7. Click on "**Selected**" radio button or "**All**" for all materials in the list
   a. *Note: If "All" option is selected from the print menu, this option will generated reports for all materials in the list based on the current set pagination (or default); 25, 50, 100, 500 materials per page.*
8. Click the "**Submit**" button to generate the file

Figure: Save Vendor (M)SDS for the selected materials as a batch

9. Save panel displays processed reports. Select the save icon from the acrobat reader program tools to save all the generated documents.

Figure: Save batch Vendor (M)SDS for the selected materials

5.3 Email a batch of Vendor (M)SDS

This exercise, demonstrates the steps on "how to email multiple Vendor (M)SDSs" as a single batch file in pdf format.

Steps: Email a batch of Vendor (M)SDS as a PDF file

1. Select the "**Home**" module button 🏠
2. Select "**folder**" name 📁

3. Select **checkboxes** ☐ for each row in the materials list or click on the checkbox header to mark all materials in the displayed list
4. Click on **"Send To"** button to open print menu options
5. Select **(M)SDS** radio button from the Email 'Send To" menu
6. Select "**Vendor**" checkbox
7. Click on "**Selected**" radio button or "**All**" for all materials in the list
   b. *Note: If "All" option is selected from the print menu, this option will generated reports for all materials in the list based on the current set pagination (or default); 10, 25, 50, 100, 500 materials per page. Default is always set to 10.*
8. Click the "**Submit**" button to generate the file

Figure: Email a batch Vendor (M)SDS for the selected materials
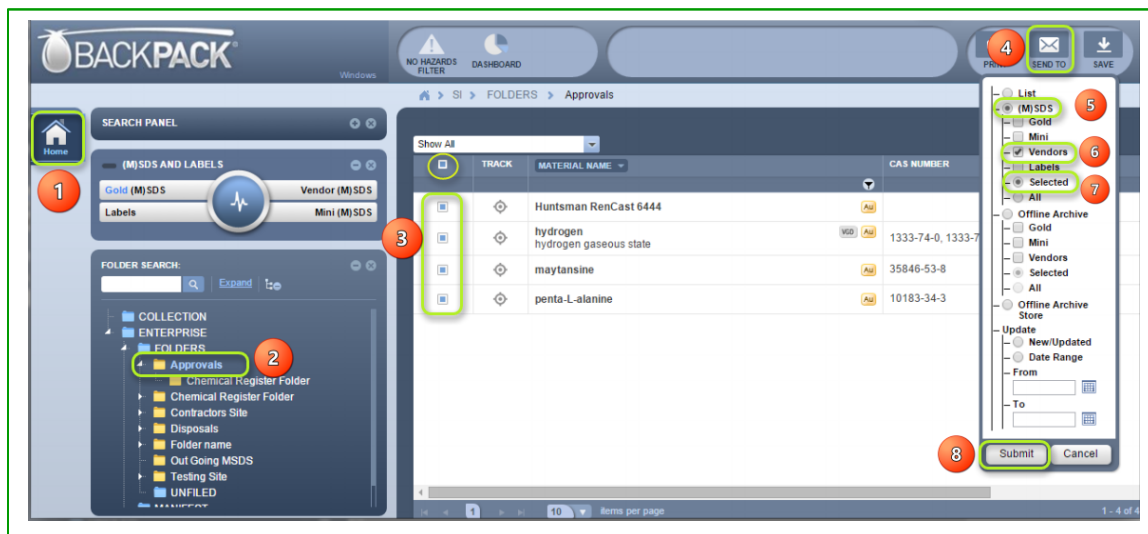
9. Mail panel displays emailing fields.

    a. Type **email address** to send the report file "**To**"

    b. **Do not change the default "Form" field**. Note that if you change the "from" default 'do not reply' address may not be accepted by spam filters due to security settings

    c. Type the "**Subject**" for the email

    d. Type "**comments**" in the Comments text field

    e. Type "**your email address**" in the Reply to" field. Note that this field will provide us with your email address for a quicker response from Chemwatch support.

10. Click the "**Send**" button to send the report batch file.

Figure: Send (email) batch Vendor (M)SDS for the selected materials

5.4 Batch Print Vendor (M)SDS by Date
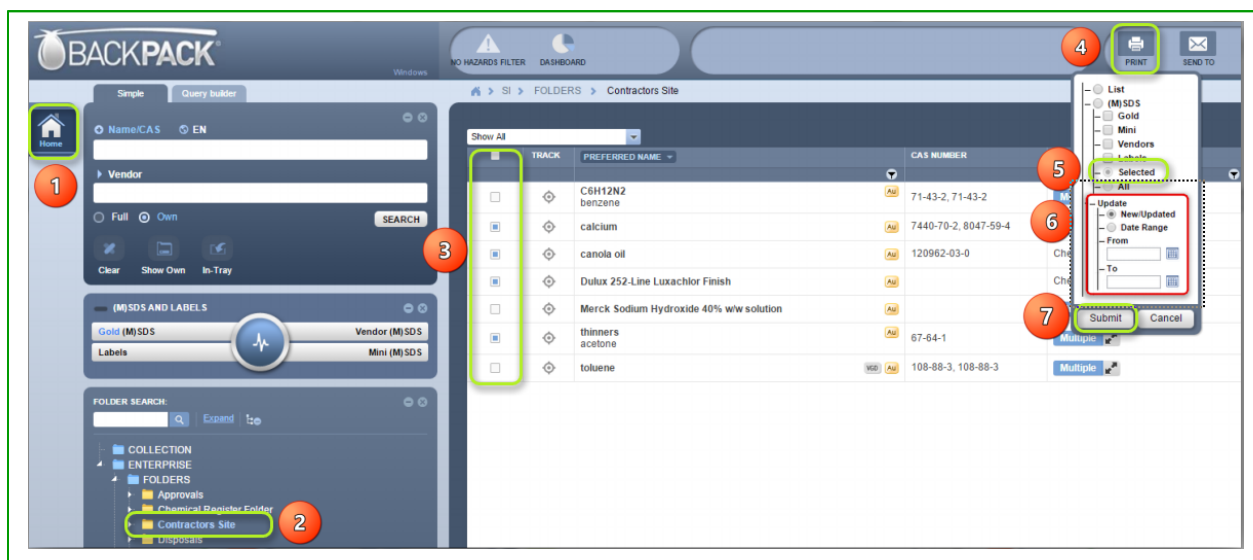
This exercise, demonstrates the steps on "how to print multiple Vendor (M)SDSs" into a single batch file in pdf format by "**New/Updated" Date** or by a specific "**Date Range**". This helps to collate all Vendor (M)SDSs by date for selected materials.

5.4.1 Batch Print Vendor (M)SDS by New/Update

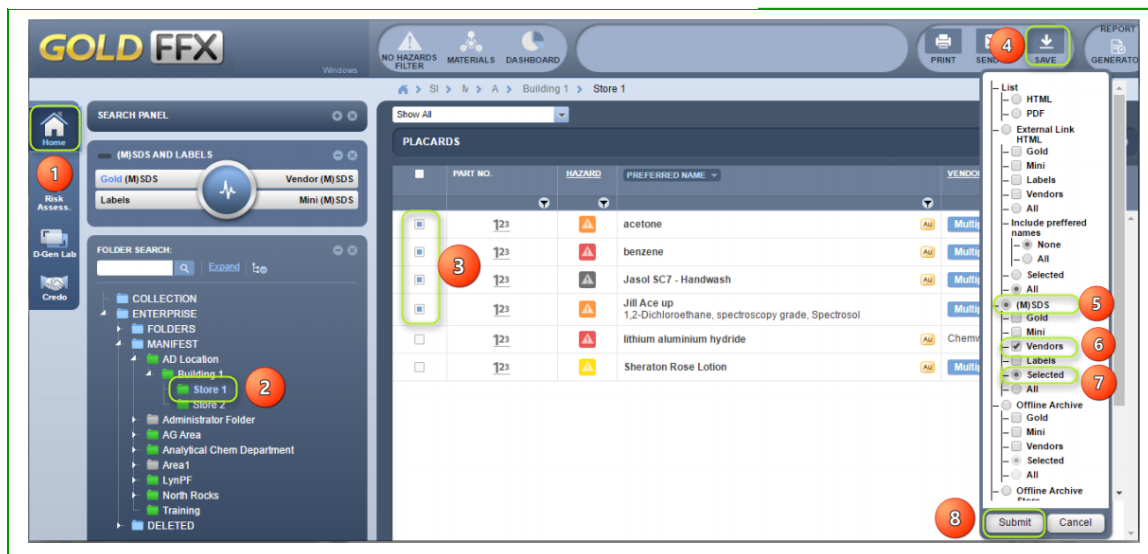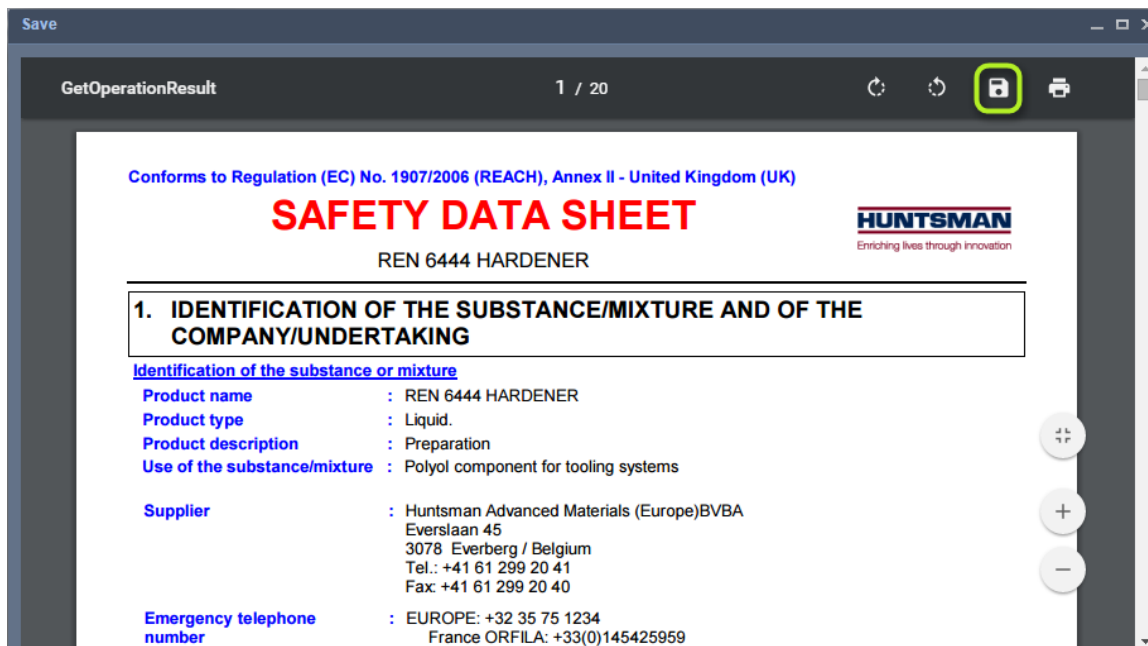**Steps: Batch print Vendor (M)SDS by New/Update Date**

1. Select the "**Home"** module button 🏠
2. Select "**folder**" name 📁
3. Select **checkboxes** ☐ for each row in the materials list or click on the checkbox header to mark all materials in the displayed list
4. Click on **"Print"** button 🖨 to open print menu options
5. Click on "**Selected**" radio button or "**All**" for all materials in the list
   a. *Note: If "All" option is selected from the print menu, this option will generate reports for all materials in the list based on the current set pagination (or default); 25, 50, 100, 500 materials per page. Default is always set to 25.*
6. In Update segment, select "New/Update" radio button for newly or recently updated Vendor (M)SDSs, or pick a date range by assigning calendar dates. In this case, "New/Updated" will be selected
7. Click the "**Submit**" button to generate the file

Figures: Print New/Updated Vendor (M)SDS for the selected materials

8. Print panel displays process bar and estimated time frame to generate the batch links. Select the print icon from the acrobat reader program tools to print all the generated documents.

Figures: New/Updated Vendor (M)SDS batch file links for the selected
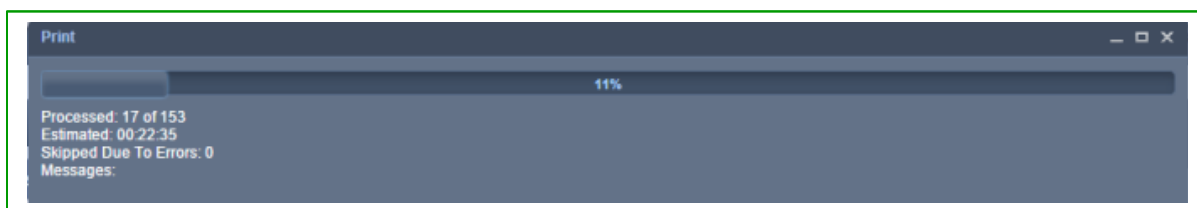
9. Select each batched process data range of 20 records per batch by clicking the link to open the file

Figures 66: New/Updated Vendor (M)SDS batch file links generated
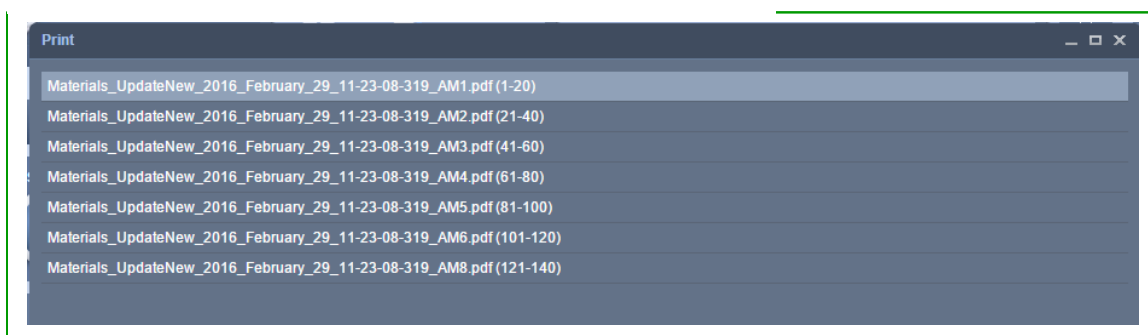
10. Print the Vendor (M)SDS from the "**acrobat reader print icon**"
11. Click the "**Back**" button to go back to the list of document links to print the Vendor (M)SDSs. Repeat the process from step 9 until all documents are printed out.

Figures: Print New/Updated Vendor (M)SDS batch file generated materials
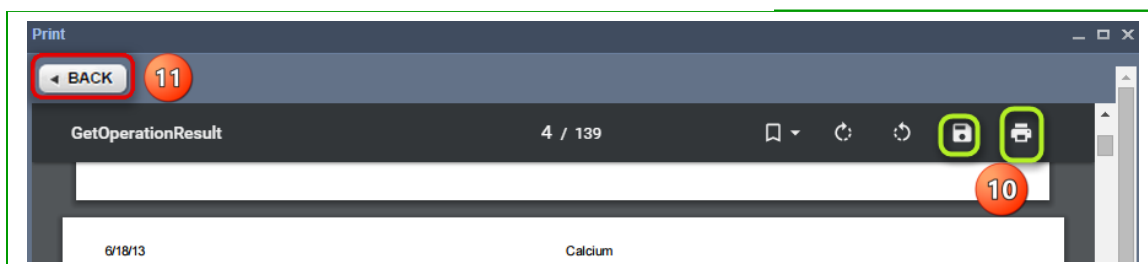
5.4.2   Batch Print Vendor (M)SDS by Date Range
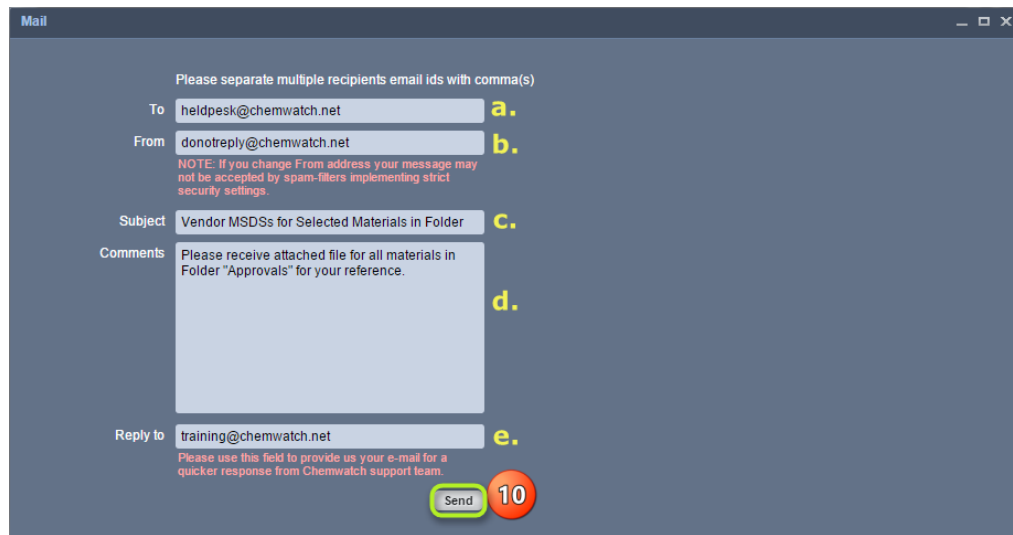
Steps: Batch print Vendor (M)SDS by Date Range

1. Select the "**Home**" module 🏠
2. Select "**folder**" name 📁
3. Select **checkboxes** ☐ for each row in the materials list or click on the checkbox header to mark all materials in the displayed list
4. Click on **"Print"** button 🖨 to open print menu options

5. Click on "**Selected**" radio button or "**All**" for all materials in the list

    a. *Note: If "All" option is selected from the print menu, this option will generate reports for all materials in the list for the selected date range.*

6. In Update segment, select "Date Range" radio button to assign "From and To" date range from the calendar date. Pick "From" date by clicking on the calendar icon and select dd/mm/yy

Figure: Print Vendor (M)SDS by date range
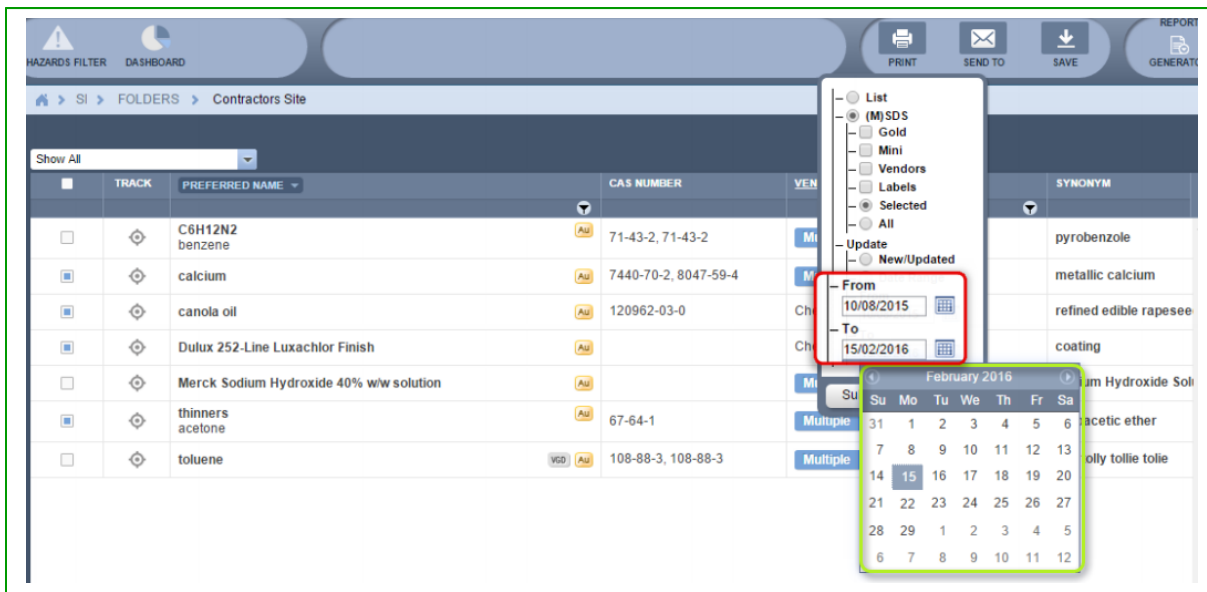
7. Click the "**Submit**" button from the print panel to generate the file

Figure: Assign date range
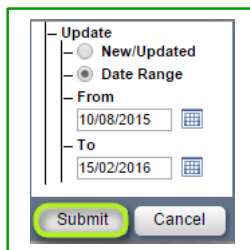
8. Print panel displays processed reports. *Select the print link from the processed items*

Figure: Batch print Vendor (M) by Date Range from generated pdf links

Materials_UpdateNew_2016_February_29_11-23-08-319_AM1.pdf (1-20)
Materials_UpdateNew_2016_February_29_11-23-08-319_AM2.pdf (21-40)
Materials_UpdateNew_2016_February_29_11-23-08-319_AM3.pdf (41-60)
Materials_UpdateNew_2016_February_29_11-23-08-319_AM4.pdf (61-80)
Materials_UpdateNew_2016_February_29_11-23-08-319_AM5.pdf (81-100)
Materials_UpdateNew_2016_February_29_11-23-08-319_AM6.pdf (101-120)
Materials_UpdateNew_2016_February_29_11-23-08-319_AM8.pdf (121-140)

Figures 70: Generated batch files as per date range

9. Select each batched process data range of 20 records per batch by clicking the link to open the file
10. Print the Vendor (M)SDS from the "**acrobat reader print icon**"
11. Click the "**Back**" button to go back to the list of document links to print the Vendor (M)SDSs. Repeat the process from step 9 until all documents are printed out.

Figure71: Print generated batch files as per date range
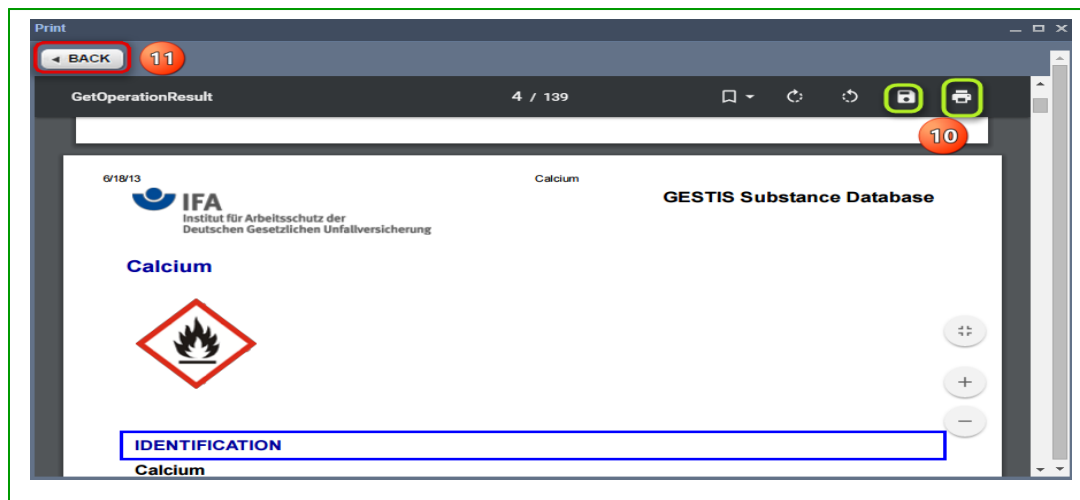
6 Preferred Names and Part Numbers

Generally, the IUPAC system of naming chemicals include long and slightly complex chemical names, which tend to be difficult to remember, especially when searching databases for such products. A common industrial product such as "N-Phosphonomethyl glycine" can be assigned a preferred name or a part number for ease of reference and searching the database using a trivial name only respective to its use within your organisation or site or used by teams. Another way of assigning a reference stock number (part number) to a material or product in the database helps to quickly find the material or product by conducting a simple search by the assigned part number. Note that part numbers can also be "Vendor dependent or User dependent".

What is a "Preferred Name"?

A *preferred name* is any name that can be created and assigned to a material for the ease of searching the database. A preferred name is strictly user or domain dependent.

Creating a preferred name or part numbers is attributed to user privileges as determined by the administrator of the program within your business or organisation. Some users may only be allowed to view preferred names or part numbers, search by those assigned preferred names or part numbers. If uncertain of your privileges, contact you're a system's administrator or send an email to helpdesk@chemwatch.net.

In this section, the information below will be used to illustrate the use of preferred names and part numbers.

Name of Product	Preferred Name by User	Part Number
N-Phosphonomethyl glycine	**Roundup**	Product Number "**P9556**"

6.1 Creating a Preferred Name

Steps: Creating a preferred name for a material

1. Select the "**Home**" module button 🏠
2. Select "**folder**" name 🟩 that contains materials
3. 🖱 **Mouse right click** on material
4. Select "**Add Preferred Name**" from the menu

Figure: Add preferred name from menu
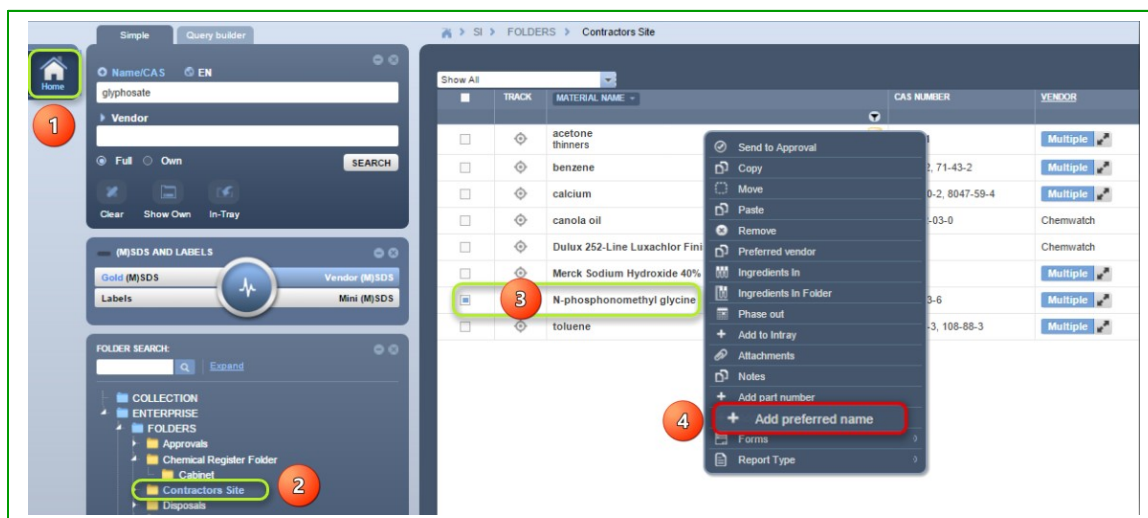
5. Press on "**Preferred Name**" tab
6. Click on "**Add New**" button

Figure: Add new preferred name
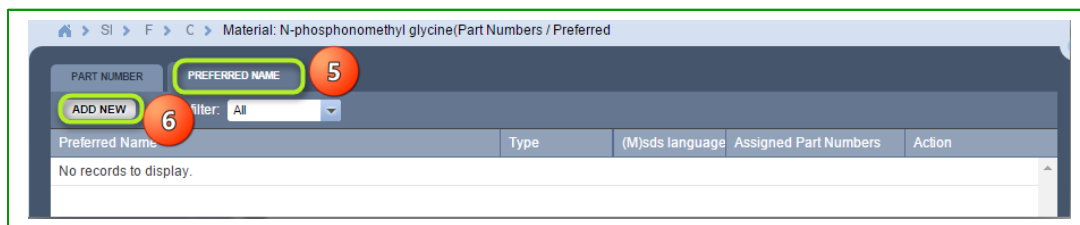
7. Select **drop down arrow** to set applicable language if required or set language to "**Any**". Note that "any will apply to any available language filter
8. Type the "**Preferred Name**" in the preferred name text field, e.g., *Roundup*
9. Click the "Save" button and confirmation message displays

Figure: Save preferred name
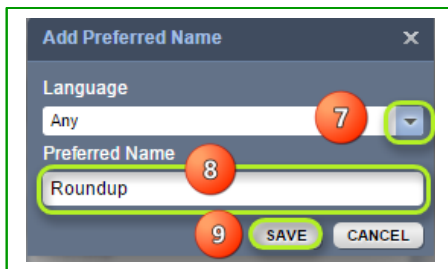
Figure: Successfully saved preferred name
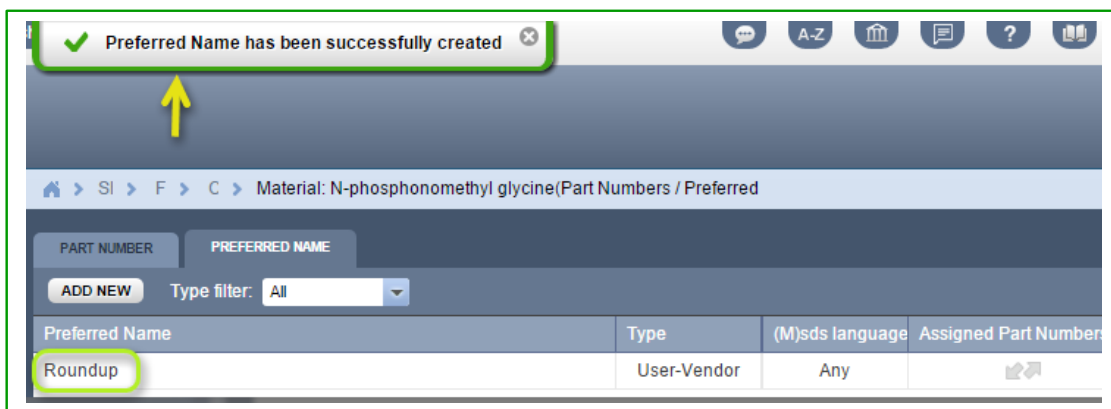
10. The Materials column header contains a drop down arrow to set preferred name to display as first name and interchangeable

Figure: Preferred name display on Materials Table

6.2 Adding a Part Number to a Material

Steps: Adding part number to a material

1. Select the "**Home**" module button 🏠

2. Select "**folder**" name ![folder icon] that contains materials
3. ![mouse icon] **Mouse right click** on material
4. Select "**Add Part Number**" from the menu

Figure: Add part number from menu
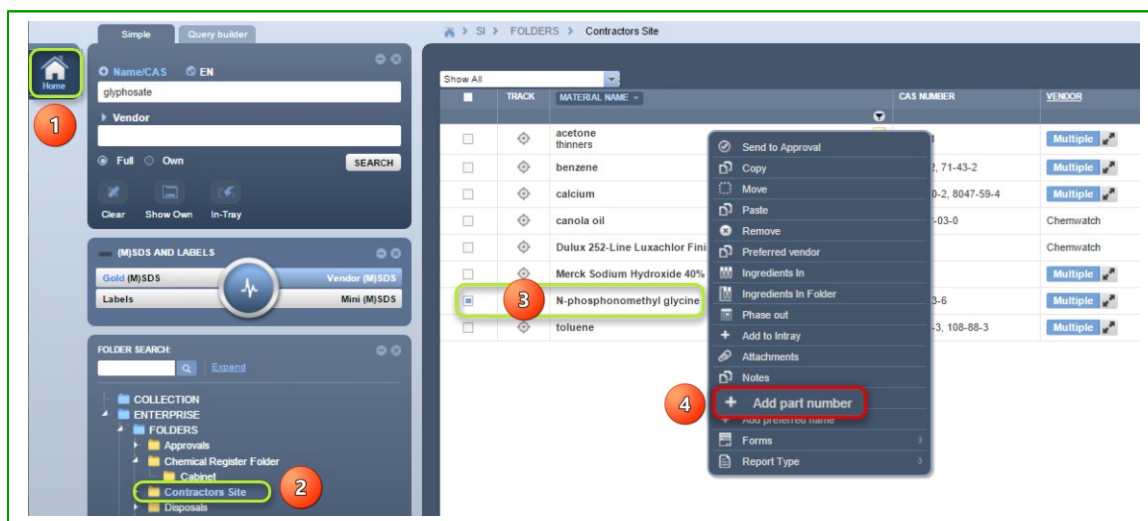
5. Press on "**Part Number**" tab
6. Click on "**Add New"** button

Figure: Add new part number
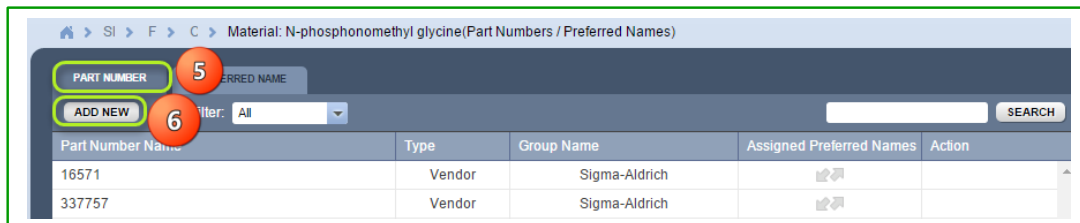
7. Add Part Number, e.g., *"P9556"*
8. Click the "Save" button and confirmation message displays

Figure: Save new part number
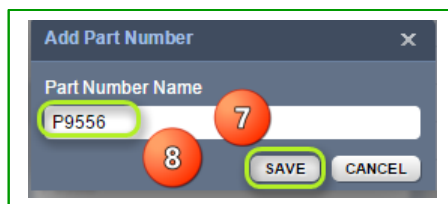
Figure: User-Gold part number
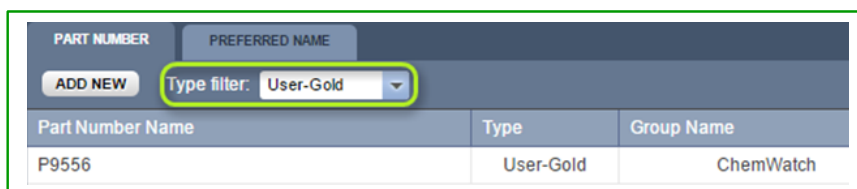
9. Sort by type of filter "User Gold" to display Part number.

6.3 Search by Preferred Name

Steps: Search by preferred name

1. Select **"Home"** Module button

2. Select **"Vendor (M)SDS"** button within the (M)SDS and Labels panel

3. Press the **"Own"** database option within the search panel.

4. Type the **"Preferred Name"**, in the Name/CAS field, in this worked example, the preferred name created earlier; *Roundup* is used

5. Select the **"Search"** button

Figure: Search by preferred name
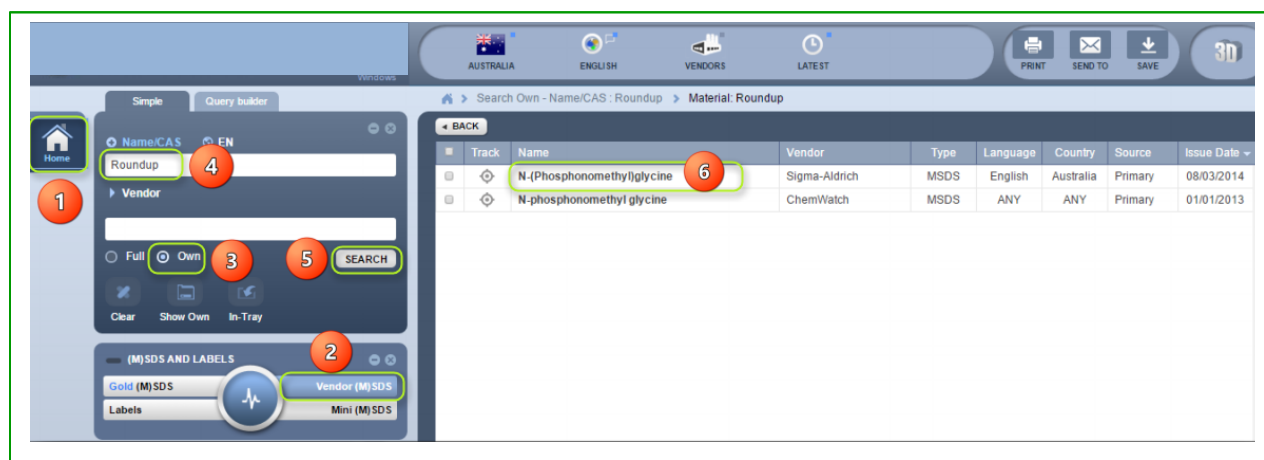
6. The search results list the name of the material assigned with the aforementioned preferred name. ***Click*** on the ***document name*** within the list ***to display available vendor (M)SDS***.

6.4 Search by Part Number

Steps: Search by part number

1. Select Home Module button
2. Select Vendor (M)SDS button **Vendor MSDS** within the (M)SDS and Labels panel
3. Press the "Own" database option within the search panel.
4. Select **Name/Cas icon** **◉ Name/CAS** in the search panel header
5. Click on "**Part No**" from the drop down list panel and select "**User Part No**"

Figure: Search by user part number

6. ***Type the Part number*** for the material, for example; "***P9556***"
7. Press the **"Search"** button **SEARCH**
8. ***Click on the document name*** within the list ***to display the Vendor (M)SDS.***

Figure: Search by user part number
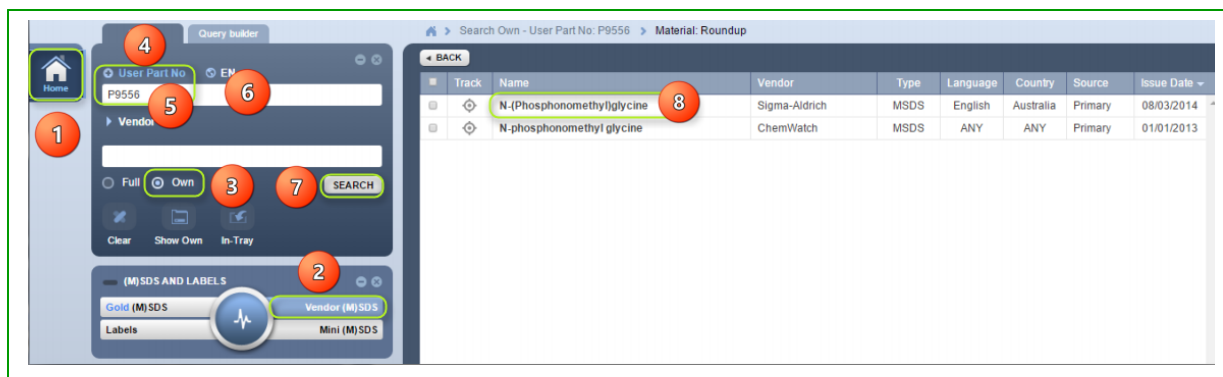
6.5 Editing Preferred Name and Part Number

Steps: **Editing preferred name**

1. Select the "**Home"** module button
2. Select "**folder**" name that contains materials
3. **Mouse** "**right click**" on material
4. Select "**Add Preferred Name**" from the menu
5. Click action "**Edit**"
6. **Type** new **preferred name**
7. Click "**Save**" button

Figure: Search by user part number
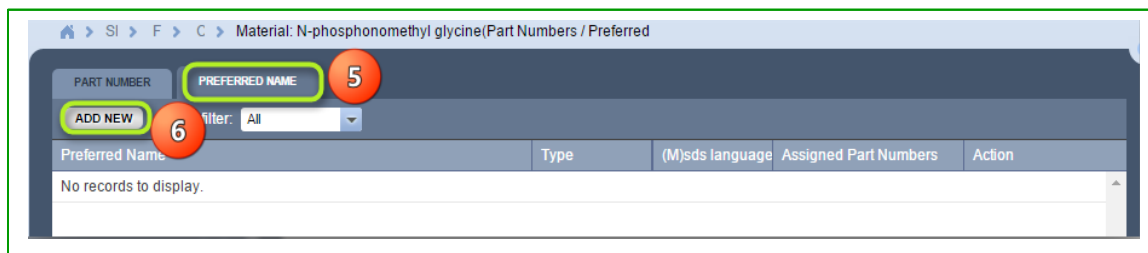
Figure: Edit preferred name
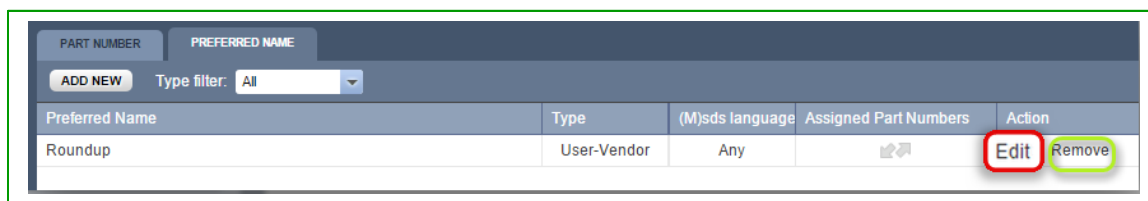
Figure: Save edited preferred name
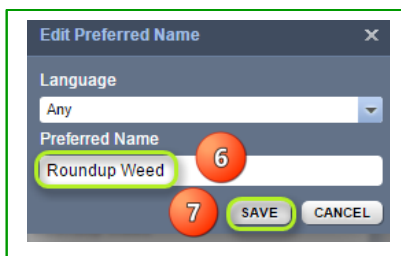
6.6 Edit a User Part Number

**Steps:** **Editing a user part number**

1. Select the "**Home**" module button 🏠
2. Select "**folder**" 📁 name that contains materials
3. 🖱️ **Mouse right click** on material
4. Select "**Add Part Number**" from the menu

Figure: Add part number to edit
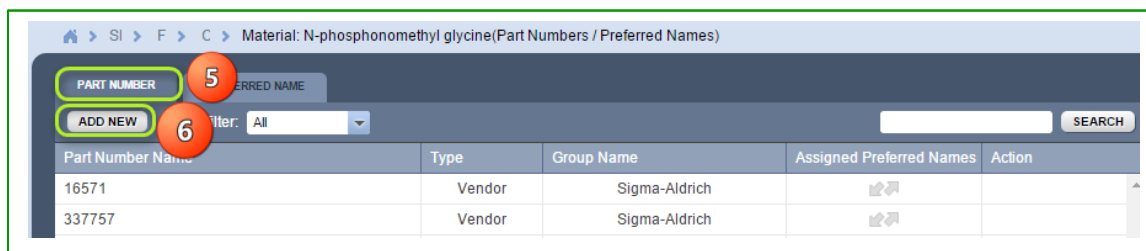
5. Press on "**Part Number**" tab
6. Select the "**Type filter**" drop down arrow ▾
7. Set the filter to "**User-Gold**"

Figure: Edit User-Gold part number
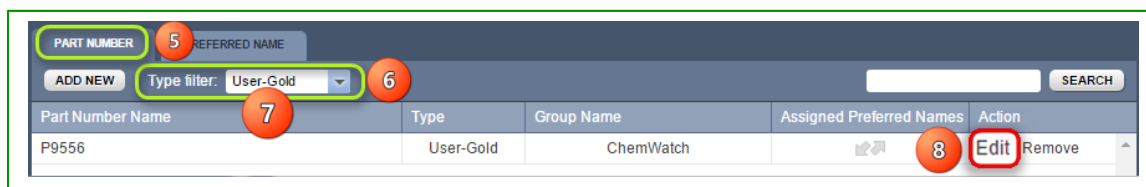
8. Click the "**Edit**" link

Figure: Edit User-Gold part number
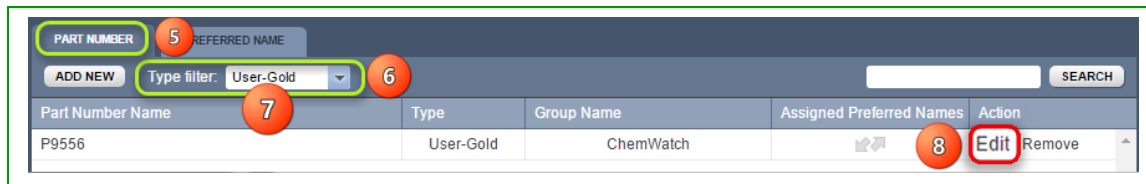
9. **Edit** part number
10. Click the **"Save"** button ⬛SAVE

Figure: Save User-Gold part number
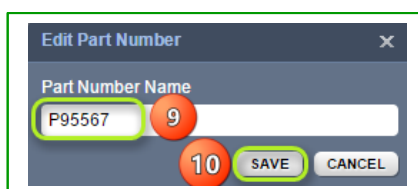
7 The Manifest

What is a "Manifest"?

The **Manifest** in Australian WHS Regulations is defined as a register of hazardous substances or hazardous chemicals, with known quantities, stored and handled on the PCBU premises and subject to compliance schedules' requirements.

WHS Overview in Australia

Legislative Arrangement

Note that the system may be set as per jurisdiction to reflect the applicable parameters for Country and Language, in turn, once the settings have been applied, the relevant jurisdictional arrangement will be set for that particular jurisdiction, e.g. EU/Language will apply "REACH" for this jurisdiction (refer to the Filter settings table above "*MSDS Format Filter Condition").* *For this guide, the settings are applicable for Australia/English and NOHSC/GHS formats.*

The *Australian Federal Government* have extensively legislated instruments and protocols to ensure that all *PCBUs* meet the required application of the respective laws in chemical safety at the workplace and the environment. All chemical users have the responsibility to follow the rules specified in the Model WHS laws for the harmonisation of work health and safety laws. The classification of workplace hazardous chemicals introduced in the *NOHSC model regulations* since 1994 and the Dangerous Goods standards in 2001 and their subsequent adoption by jurisdictions were classified by the *Approved Criteria for Classifying Hazardous Substances* and the *Australian Dangerous Goods Code for Transport by Road and Rail (ADG Code)*. The States and Territories implement their own systems to manage workplace health and safety risks based on the national standards and regulations which stem from the *WHS Act*. A new system of chemical classification and hazard communication on labels and Safety Data sheets based on the *Globally Harmonised System (GHS) of Classification and Labelling of Chemicals* was adopted through the *National Model Work Health and Safety Regulations in 2012*. The scope and application of compliance standards follows an institutional framework in chemicals management, i.e. *Philosophy, Legislative Context, Content and Application.* Transitional arrangements have been put in place providing a five year transition period *(2011-2016)* for moving to the new GHS system that will allow the NOHSC criteria and the GHS system to be used concurrently by industry.

Table: WHS Overview

Scope	Principle Description
Philosophy	▶ PCBU required to **identify hazards and potential risks** to injury, illness, danger for all types of hazards [physical, health and environmental]
	▶ **Assessment of risks** associated with chemical handling, usage and storage and the consequences of injury, illness, danger. Note: Risks depend on the nature of the hazard, degree of exposure and frequency of use
	▶ **Instituting of appropriate controls** to eliminate or minimise the risks by using the hierarchy of control principle: elimination, substitution, isolation, engineering control, safe-work practices and/or protective equipment

Legislation	The **Model work Health and Safety Laws** consist of the following instruments ▸ **Model Work Health and Safety (WHS) Act** ▸ **Model WHS Regulations** ▸ **Model Codes of Practices** ▸ **National Compliance and Enforcement Policy** [Under the <u>Intergovernmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety</u> all jurisdictions have committed to adopting the model work health and safety legislation, with minor variations as necessary to ensure it is consistent with relevant drafting protocols and other laws and processes operating within the jurisdiction]
Application	PCBU required to ensure compliance to jurisdictional WHS regulations. The states and territories control the use of chemicals relating to prohibition, application of occupational exposure standards, health surveillance and monitoring, pollution, waste management, environmental protection, storage and handling of hazardous chemicals and dangerous goods. The regulations are made under section 276 of the WHS Act and the related chapters include the following; • Representation and participation • Managing risks to health and safety • Hazardous work; noise, manual tasks, confined spaces, falls, demolition, accreditation and competency • Plant and structures • Construction work • Hazardous chemicals • Asbestos • Major hazard facilities • Mines • Exemptions and reviews

<table>
<tr>
<td rowspan="3">**Content**</td>
<td>Guidance notes made available for the guide to the model WHS regulations. Safety data sheets required to be made available to workers exposed to hazardous chemicals at the workplace. The guide helps users with information on the provisions of the model and identify applicable duties or rights related to the specific work/task involved.

▶ **Model Codes of Practices**

▶ **Australian standards**

▶ **Guidance Notes**

▶ **Industry practices**

The main objective of the application is provide users of chemicals at the workplace with access to (M)SDS in order to meet compliance requirements pertaining to information on usage, storage, and handling of hazardous substances and transportation of dangerous goods. Officers must exercise 'due diligence' to ensure that the business or undertaking complies with the WHS Act and Regulations.</td>
</tr>
</table>

WHS Regulators and Transition

The national and compliance and enforcement policy sets out the principles endorsed by Workplace Relations Minister's Council in terms of the approach to work health and safety regulators to monitor and enforce compliance with the act and regulations. The policy is available in the website: www.safeworkaustralia.gov.au.
 Safe Work Australia has developed transitional principles that set out the arrangements and subsequently, each state and territory work health and safety regulator has developed resources to assist the respective jurisdiction with the transition. for more information, contact your regulator.

- Complying with work health and safety laws.
- Reporting a workplace incident.
- Renewing or applying for licenses.
- Injury and workers' compensation claims.
- Workers' compensation insurance and premiums.
- Registration and notification of plant and plant designs.
- Health and safety representative training.
- Work health and safety training and assessment.

Commonwealth Regulators

http://www.safeworkaustralia.gov.au/sites/swa/about/who-we-work-with/regulators/commonwealth-national/pages/commonwealth-national-regulators

Transition

There will be a 5 year transitional period for moving to the new GHS-based system, which will allow for the two systems to be used concurrently by industry across Australia. Workplace chemicals will not need to be re-classified or re-labelled immediately. During the 5 year transition period, manufacturers may use either the GHS for classification, labelling and SDS, or the previous hazardous substances and dangerous goods classification systems. After 31 December 2016, at the end of the 5 year period, all workplace chemicals must be classified according to the GHS and labels and SDS must be updated. This is illustrated in the following diagram, including the relevant documents to use for classification, labelling and SDS.

Until 31 December 2016	From 1 January 2012(mandatory after 31 December 2016)
Hazardous Substances Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]	Hazardous Chemicals Globally Harmonised System of Classification and Labelling of Chemicals 3rd Revised Edition
Dangerous Goods Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) [Note that the ADG Code applies to the transport of dangerous goods by road and rail. It will still apply to the transport of dangerous goods by road and rail after 31 December 2016]	ADG Code applies in GHS
Labels National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]	Labels National model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011)
MSDS National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]	SDS National model Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals (2011)

In Australia, there are three instruments currently in use; Approved Criteria for the Classification of Hazardous substances, Australian Dangerous Goods Code and the *Globally Harmonised System for the Classification and Labelling of Hazardous Chemicals (GHS)*.

The principal purpose of the manifest is to provide the emergency services authority with information on the quantity, type and location of dangerous goods stored and handled on premises to enable them to respond to an incident. An extensive list of requirements can be found in the applicable national standards and code of practices for storage and handling of dangerous goods with reference to applicable jurisdiction.

Table Listing Some WHS Regulations' schedules pertaining to manifest related requirements

Schedule 10	Schedule 11	Schedule 12	Schedule 13
Prohibited carcinogens, restricted hazardous chemicals	*Placard and manifest quantities*	*Manifest Requirements*	*Placard requirements*
The prohibition of the use of carcinogens are listed in table 10.1, and the restriction of the use of carcinogens listed in table 10.2, apply to the pure substance and where the substance is present in a mixture at a concentration greater than 0·1%, unless otherwise specified. *Regulations 340 and 380–384*	Determine classification of flammable liquids and the required Placarding if threshold amounts have been exceeded for all applicable hazardous chemicals *Regulations 347–350, 361, 390 and 391*	Bulk storage and containers Identification of hazardous chemicals Storage area for packaged hazardous chemicals Hazardous chemicals being manufactured Hazardous chemicals in transit Plan of the workplace	Displaying placards Maintaining placards Outer warning placards Placard for bulk storage, unstable explosives, organic peroxides type A or self-reactive substances type A in bulk Placard for packaged Schedule 11 hazardous chemicals other than flammable liquids and IBCs
Schedule 14	Schedule 15	Schedule 16	Schedule 17
Requirements for health monitoring	*Hazardous chemicals at major hazard facilities and their respective threshold quantities*	*Matters to be included in an emergency plan for major hazard facility*	*Major hazard facility in safety cases*
Table 14.1 Hazardous chemicals (other than lead) requiring health monitoring *Regulations 368, 370 and 406*	Identification of hazardous chemicals in hazard facility Threshold quantities	Size and hazard detail Command structure and site personnel. Procedures Resources and equipment	Operational controls Principles and standards Monitoring

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What is a "hazardous substance"?

Hazardous substances are those that, following worker exposure, can have an adverse effect on health. Examples of hazardous substances include poisons, substances that cause burns or skin and eye irritation, and substances that may cause cancer. Many hazardous substances are also classified as dangerous goods.

A substance is deemed to be a hazardous substance if it meets the classification criteria specified in the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004] (Approved Criteria).

How is a hazardous substance identified in the GoldFFX system?

Identification of hazardous substances from a material register in a Manifest Area\Section\Location has been incorporated into the Manifest Module, the program automatically calculates the risks codes and risk phrases for that particular hazardous substances. Accordance to the criteria for classifying hazardous substances, there are 68 risk statements and corresponding safety phrases. The program utilises these codes for the classification of chemicals added into the manifest. The "Material Name" column displays the name of the chemical and identifies the respective *Risk Code (RCode)* assigned to the chemical if it is considered to be a hazardous substance as shown in the screenshot below. The

summary of the classification information is also provided through the colour coded hazard icons within the hazard column of the manifest grid.

Figure: Manifest Materials Table set to Risk Statement Codes

HAZARD	MATERIAL NAME ▼		RISK ▼ STATEMENT	VENDOR		VOL / WT METRIC ▼ CURRENT ▼		DG S1 S2	PKG	APPROV.
⚠	1,2-Dichloroethane, spectroscopy grade, Spectrosol Jill Ace up		R20/21/22	Multiple ⤢		0 L	✎	3	II	✖
⚠	acetone	Au	R11, R36, R66, R67,	Multiple ⤢		0 L	✎	3	II	✖
⚠	benzene	Au	R11, R36/38, R45(1), R46(2), R48/23/24/25, R65, R67	Multiple ⤢		30 L	✎	3	II	✖
⚠	Jasol SC7 - Handwash	Au		Multiple ⤢		0 L	✎	None		✖
⚠	lithium aluminium hydride	Au	R12, R14/15, R35, R37, R41,	Chemwatch		0 L	✎	4.3	I	✖
⚠	Sheraton Rose Lotion	Au		Multiple ⤢		0 L	✎	None		✖

The hazardous substances risk codes and dangerous goods classification generated for each material; depend on the availability of a Gold MSDS authored by Chemwatch.

What do these hazard colour coded icons mean?

The hazards ratings employ the Hazard Alert Code hazard bars derived from five main categories; Flammability, Toxicity, Body Contact, Reactivity and Chronic. The highest rating is the conclusive nature of the hazard. This information is shown in the colour coded hazard column icons for each classified material. The table below provides a summary of the logic behind the colour coding of each icon with respect to the nature of the hazard based on the any of the five main categories and the colour coding designated per level of the hazard conclusion.

Hazard Category	Rating	Hazard Level	Code	Icon	Nature of Hazard Substance
Flammability Toxicity Body Contact Reactivity Chronic	0/Min	Non	Grey	⚠	Non Hazardous Substance
	1	Low	Blue	⚠	Low Hazardous Substance
	2	Moderate	Yellow	⚠	Moderate Hazardous Substance
	3	High	Orange	⚠	Highly Hazardous Substance
	4	Extreme	Red	⚠	Extremely Hazardous Substance
No CW Classification	N/A	N/A	Question mark	?	Classification not provided by Chemwatch. However, the Vendor MSDS has been classified by manufacturer.
Conflict Icon	N/A	N/A		❗	This icon depicts a conflict of hazard risk codes assigned to a Vendor MSDS Material

Displaying the Hazard Summary Label

Select the hazard icon to display the relevant hazard summary classification label. The hazard summary label window displays hazard rating categories, physical property, GHS pictograms, DG diamond, DG classification data, Risk Codes and Statements, Hazard Codes and Hazard Statements. The material "*Acetone*" is shown to have a high level rating for its flammability.

Figure: Hazard icon display

The hazard icon data include the DG classification, Risk Codes and risk Phrases, Chemwatch Hazard Rating per category, GHS graphics and hazard graphics to provide a summary about the chemical at a glance. *In this example, "Acetone" is concluded to be a **highly hazardous** substance due to its "Flammability" category, which is rated 3 (designated as high).*

Figure: Hazard summary label

What is "GHS"?

The *Globally Harmonised System of Classification and Labelling of Chemicals (GHS)* is an internationally agreed system created by the United Nations to replace the various classification and labelling standards used in different countries. The standardisation of hazard classification of chemicals in the identification criteria on the global level consistently aims at improving knowledge of the chronic health hazards and encourage the elimination of hazardous chemicals, especially carcinogens, mutagens, reproductive toxins or their replacement with less hazardous chemicals.

Does the Chemwatch system cover "GHS"?

The GoldFFX system covers GHS in MSDS Settings, Gold MSDS, Mini MSDS, Emergency Reports, Manifest, Risk Assessments and Labels.

What is Hazard Communication?

Hazard communication is a term used for the description of critical information about chemical hazards and relevant precautions for safe storage, handling and disposal. Hazards are communicated through signal words, hazard statements and precautionary statements on labels and SDS.

The identification of hazardous chemicals and their subsequent classification are derived from the GHS instrument as per WHS Regulations. Hazards include things and scenarios that may potentially harm people in the workplace, especially when working with chemicals and their interaction with physical work environment, equipment, work design, tasks and management. Common examples of such hazards include;

- *Hazardous chemicals* such as acids, hydrocarbons, heavy metals and dusts can cause respiratory illnesses and cancer
- Machinery and equipment, extreme temperatures, psychosocial hazards

It is a WHS requirement to read an (M)SDS and container label for a chemical stored at the workplace or used in a work related activity in order to take the necessary precautions where applicable. *Section 2 of an (M)SDS* specifies the hazards (hazard statement) as per classification of the material based on the GHS instrument. The hazard statement describes the nature of the hazard, including the degree of the hazard and the respective precautionary statements. Precautionary statements describe the measures that must be taken to minimise or prevent adverse effect from exposure or improper storage and handling of a hazardous

chemical. These statements are assigned to each hazard class and category with the respective label. The appendix contains a table for the divisions of GHS hazards classes and categories for more information on the classification criteria of the GHS system for Australian compliance requirements.

The table below provides an overview of the GHS summary table showing known hazard types and the respective GHS symbols or pictograms as part of the hazard communication tool.

Table: GHS pictograms for the various types of hazards

Hazard Type	Specific Hazard	Hazard Communication Statements	Pictograms Workplace Hazard
PHYSICAL	Explosives, Flammable Gases, Flammable Aerosols, Oxidising Solids, Gases and Liquids, Gases under Pressure, Flammable Liquid, Flammable Solid, Self-Reactive Substances, Pyrophoric Liquid, Pyrophoric Solid, Self-Heating Substances, Organic Peroxides, Corrosives to Metals.	Hazard Communication system for Labelling, Placarding and Safety Data Sheets. *Signal Words* GHS utilises the words DANGER and WARNING as signal words to indicate the relative level of severity of hazard. DANGER – used for the more severe or significant hazard.	**Explosives** **Flame** **Flame Over Circle** **Gas Cylinder** **Corrosion**
HEALTH	Acute Toxicity, Skin Corrosion, Skin Irritation, Serious Eye Damage, Eye Irritation, Respiratory Sensitisers, skin Sensitisers, Germ Cell Mutagenicity, Carcinogenicity, Reproductive Toxicity, specific Target Organ Toxicity, Aspiration Hazard.	*Hazard Statements* Hazard statements are assigned to a class and category depending on hazard nature/degree of hazard. *Precautionary Statements* Phrases (and/or pictograms) that describe recommended measures to minimise or prevent adverse effects from exposure to a hazardous substance.	**Skull and Bones** **Corrosion** **Exclamation Mark** **Health Hazard**
ENVIRONMENT	Acute Aquatic Toxicity, Chronic Aquatic Toxicity.		**Environment**

Identification of hazardous chemicals from a material register in a Manifest Area/Section/Location has been incorporated into the Manifest Module, the program automatically calculates the Hazard Codes (*HCodes)* for each chemical. The program utilises

these codes for the classification of chemicals added into the manifest. The "Material Name" column displays the name of the chemical and identifies the respective Risk/Hazard code (H/RCode) by default and these codes are assigned to the material if it is considered to be a hazardous chemical as shown in the screenshot below. The summary of the classification information is also provided through the colour coded hazard icons within the hazard column of the manifest grid as discussed in the hazard summary label.

*Note that, to be able to display the GHS classification codes, the **R-Code button** requires to be switched to **H-Code** to reflect the codes in the Risk/Hazard column..*

Risk Code display

Hazard Code display

Exclamation icon in hazard code

AU icon in material name = implies availability of a Gold, Mini MSDS and Labels

Note that Chemwatch has introduced a new icon called "VGD", which means Vendor Gold Data. The VGD icon is assigned to material names that Chemwatch has extracted vendor gold classification data.

VGD icon [VGD] **in material name = implies availability of a vendor gold data**

MATERIAL NAME		CAS NUMBER	VENDOR
Acetone	Vendor classification extracted by Chemwatch is available.		ultiple
ACETONE [VGD] [Au]		67-64-1	Multiple
Acetone [Au]			Multiple
Acetone [VGD] [Au]			Multiple

Material name mouse hover = displays a tag for the Chemwatch Number for the material

HAZARD	MATERIAL NAME ▾		HAZARD ▾ STATEMENT
⚠	1,2-Di...roscopy grade, Spectrosol Jill A... CwNumber: 1090		⚠ H302 H312 H332
⚠	acetone	[Au]	⚠ H319 H336 AUH066
⚠	benzene	[Au]	⚠ H315 H319 H340 H350 H336 H372 H304

Dangerous Goods Classification

What are "Dangerous Goods"?

Dangerous goods are substances, mixtures or articles that, because of their physical, chemical (physico-chemical) or acute toxicity properties, present an immediate hazard to people, property or the environment. Types of substances classified as dangerous goods include explosives, flammable liquids and gases, corrosives, chemically reactive or acutely (highly) toxic substances.

The criteria used to determine whether substances are classified as dangerous goods are contained in the *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*. The ADG Code contains a list of substances classified as dangerous goods. State and territory workplace dangerous goods storage and handling laws also capture combustible

liquids. The criteria for classifying combustible liquids are contained in Australian Standard AS1940 (The Storage and Handling of Flammable and Combustible Liquids). Many dangerous goods are also classed as hazardous substances.

Generally, once a register of materials has been incorporated into the Manifest Module, the program automatically calculates the Dangerous Goods Class, Sub-Risk(s) and Packing Group for that particular article. According to the Dangerous Goods Code (for example, in Australia – the **ADG Code** is referenced). The regulation classifies dangerous goods into nine classes, which are assigned a specific dangerous goods diamond for transportation by land, air and/or rail. The program utilises these codes for the classification of chemicals added into the manifest. The "*DGC, Sub-Risk 1, Sub Risk 2 and Packing Group*" columns display the respective classification data for the chemical as part of compliance. For more information on the various DG Classes and respective **Hazchem** diamonds, refer to the Appendix.

Description of Dangerous Goods Packing Group

Dangerous substances present a variety of physical and chemical hazards. They are classified according to the nature of the hazard they present by placement in one of 9 DG Classes, based on the United Nations Dangerous Goods classification modality. Where the dangerous substance has a hazard of more than one DG Class, it may be given a DG Class and a subsidiary risk. Dangerous substances of Classes 3, 4, 5, 6.1 and 8 have been assigned to one of three categories (Packaging Groups) according to the degree of danger they present.

Level of Danger	Packing Group (PG)	DG Classes assigned to a PG
Great Danger	PGI	
Medium Danger	PGII	Classes 3, 4, 5, 6.1 and 8
Minor Danger	PGIII	

The greater the degree of danger, the more stringent the packaging requirements or instructions for the substance. Where a substance is assigned to a Packaging Group, this is listed in the Australian Code for the Transport of Dangerous Goods by Road and Rail (The ADG Code).

Class 3 Packaging Group Designators

Packing Group (PG)	Flashpoint (°C)	Initial Boiling Point (°C)
PGI	-	<35
PGII	<23	>35
PGIII	>23<61	>35

For requirements of paints, varnishes, enamels, lacquers, adhesives, polishes and other viscous flammable substances visit the 'ADG Code'.

Class 6 Packaging Group Designations

Substances of DG Class 6.1 including pesticides shall be allocated to a Packaging Group according to their degree of toxic hazard.

Packing Group (PG)	Designation
PGI	Toxic substances and preparations presenting a very severe risk of poisoning
PGII	Toxic substances and preparations presenting a serious risk of poisoning
PGIII	Harmful substances and preparations presenting a relatively low risk of poisoning

Class 8 Packaging Group Designators

For corrosive substances the criteria used comprises skin corrosiveness testing using the latest edition of the OECD Guidelines for the testing of chemicals and metals.

Other Classes

The criteria for allocations of Packaging Group to other Classes of dangerous substances can be found in the ADG Code. Visit http://www.ntc.gov.au

Identification of Dangerous Goods Placarding

Placards are labels used to identify dangerous goods stored on site which exceed the required compliance threshold for a group of DG classes. They provide visual warning of the hazard associated with the dangerous goods at the premises. Dangerous Goods definitions and applicable Hazchem signs are collated in the Appendix. If dangerous goods are stored in bulk or quantity for grouped Dangerous Goods Classes that exceed the quantity specified in the Appendix Table: "Placarding Quantity" [based on Schedule 1, 2 of the OHS Regulations] will require Hazchem placarding and labelling of dangerous goods containers appropriately.
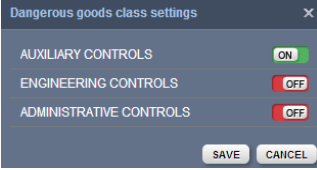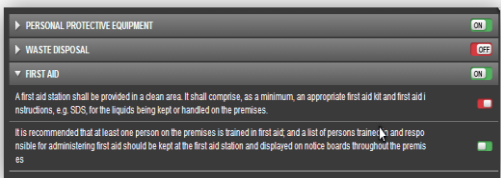
Material	DG Class	DG Sub Risk 1	DG Sub Risk 2	Packing Group	Volume/Weight
benzene	DGC 3	None		II	1000L (exceed placarding quantity threshold)

DG Settings for Guidance

Click on the Hazchem Sign (Placard DG diamond, e.g., DGC3) and select **DG Class Settings** category to load information in order view guidance information and apply on/off switch button to the applicable type of controls.

DG Class Setting Controls	Description	DG Class Setting Guidance
Auxiliary Controls	• Personal Protective Equipment • Waste Disposal • First Aid	»provides auxiliary guidance notes and information to select considerations
Engineering Controls	• Control of Ignition Sources • Machinery and Equipment • Building Installations • Bunds and Compounds • Doors and Doorways • Vapour Hazards • Lighting	»provides engineering controls guidance information to select considerations
Administrative controls	• Commissioning of New, Modified or Prepared Equipment • Site Management and Administration • Construction and Maintenance Work • Management of Leaks and Spills • Safety Information • Personnel Training • Signs and Notices • Effluent Control • Liquid Transfer • Access control	»provides administrative information to select considerations

OFF or ON	*Switching DG Class Settings on/off* *Switching DG Class Settings Guidance Data on/off*	or
Auxiliary controls turned on Dangerous goods class settings × AUXILIARY CONTROLS ON ENGINEERING CONTROLS OFF ADMINISTRATIVE CONTROLS OFF SAVE CANCEL	PERSONAL PROTECTIVE EQUIPMENT ON WASTE DISPOSAL OFF FIRST AID ON A first aid station shall be provided in a clean area. It shall comprise, as a minimum, an appropriate first aid kit and first aid instructions, e.g. SDS, for the liquids being kept or handled on the premises. It is recommended that at least one person on the premises is trained in first aid; and a list of persons trained in and responsible for administering first aid should be kept at the first aid station and displayed on notice boards throughout the premises	*Protective equipment turned on* *First Aid turned on*

7.1 Editing the Manifest

Editing the manifest includes the following attributes; folder/store management, distributing materials across folders/stores, entering material quantities (volume/weight), editing already existing material quantities, adding part numbers, adding preferred names, assigning notes to a material and the Gold MSDS and deleting materials that are no longer required in folders/stores (or no longer in use in the workplace or removing discontinued products) and filling the approvals form for a material. The following sections cover a wide range of content with respect to editing the manifest in GoldFFX system.

Attribute	Reference section in this manual
Folder management	*Section 3*
Distributing materials	*Section 4*
Adding preferred names and part numbers	*Section 6*
Adding part numbers	*Section 6*
Deleting materials	*Section 4*

Description and Use of the "Mouse Right Click Menu" as an edit function

The mouse right click functionality allows users to action specific tasks for each material in a folder. Some aspects of the listed options in the menu have been discussed in latter sections of this manual. The table below provides a summary of the attributes of the mouse right click options available to users and note that some may require administrative privileges.

Figure: Mouse Right Click Menu on materials name
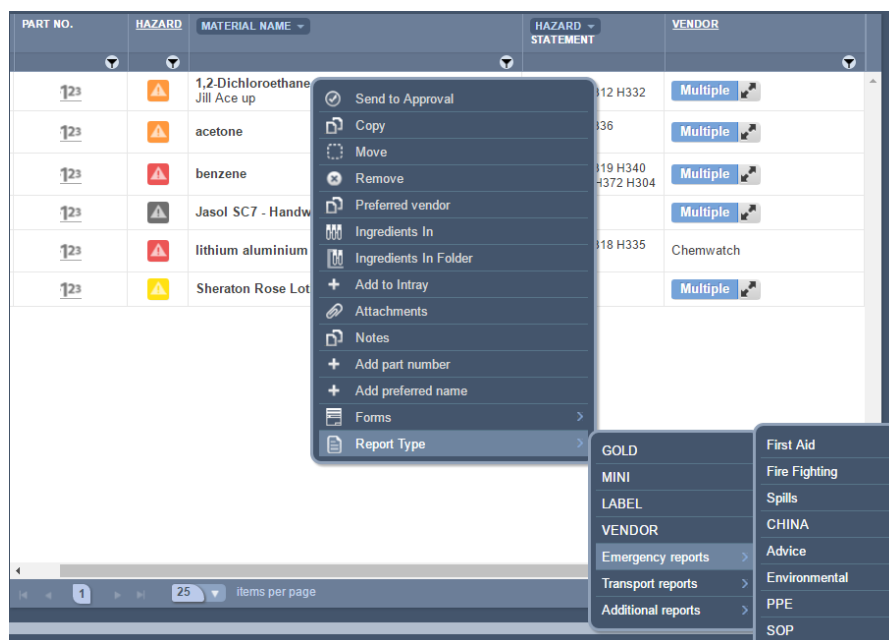
Table: Mouse Right Click Menu Descriptions

Menu Options	Description
Send to Approval	Send request for material to be approved. Applicable to Approvals Module's availability in license package
Copy	Copy single or multiple materials
Move	Move single or multiple materials
Remove	Delete a single or multiple materials
Preferred Vendor	Assign a preferred vendor to a Gold MSDS
Ingredients In	Filter for ingredients in materials
Ingredients In Folder	Filter for material ingredients in a folder
Add to Intray	Add material into a favorites folder called an intray
Attachments	Add attachments (documents) to a material
Notes	Create notes (text based) for a material and view notes in the Gold MSDS section 15
Add Part Number	Create a part number for a material
Add Preferred Name	Create a preferred name for a material

Forms	Fill in an already created form for materials
Report Type	Generate material VGD related type of report; Gold MSDS, Mini MSDS, Labels, Vendor MSDS, Emergency Reports and Transport Reports

7.1.1 Editing Manifest Volume/Weight

The manifest material can be assigned quantities in two fold.

Editing Volume/Weight

1. **Editing at Material Level**
   Assign volume/weight to the material and ignore the number of vendor MSDSs available for the material

2. **Editing at Vendor MSDS Level**
   Assign volume/weight to a vendor MSDS and ignore the material level. In this case scenario, user must expand the material row by selecting the multiple Multiple buttons.

3. **VOL/WT Unites of Measure**

VOL/WT	
VOL / WT METRIC CURRENT	Volume or Weight of the material.
Metric METRIC	Volume units drop down arrow shows unit measure to apply. **Metric** – International standard of measure with its base units known as metre,

The Edit Volume/Weight panel contains three main fields to fill quantities for a material; namely, *Current Volume/Weight, Maximum Volume/Weight, Licensed Volume/Weight* and the respective unit measure drop down list.

Steps: Editing Volume/Weight at the Material level
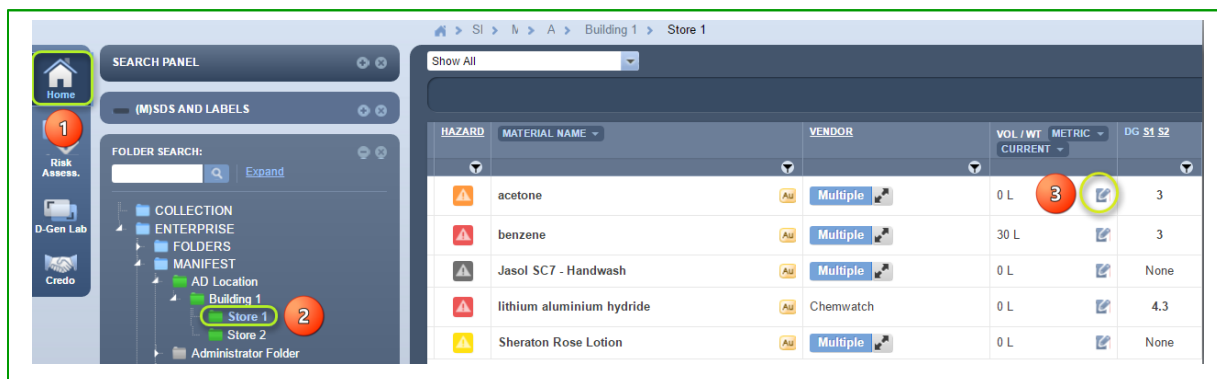
1. Select the "**Home**" module button 🏠

2. Select "**folder/store**" 📁 name that contains materials

3. Click on the "**Edit**" icon 📝 for Material Name row within VOL/WT column

4. Select "**volume/weight**" text fields and type the amount value for current, maximum or licensed vol/wt

5. Select the drop down arrow 🔽 to assign the applicable unit of measure, e.g. L for the Litre

Figure: Edit volume/weight

6. Press on "**Save**" button
7. Check the "**Placard**" generated for the Hazchem sign

Steps: Editing Volume/Weight at the Vendor MSDS level
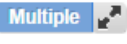
1. Select the "**Home"** module button

2. Select "**folder/store**" name that contains materials

3. Press on the multiple button **Multiple** alongside the material name row

4. Click on the "**Edit**" icon for Material Name row within VOL/WT column

5. Select "**volume/weight**" text fields and type the amount value for current, maximum or licensed volume/weight

6. Select the drop down arrow to assign the applicable unit of measure, e.g. L for the Litre

Figure: Edit volume/weight
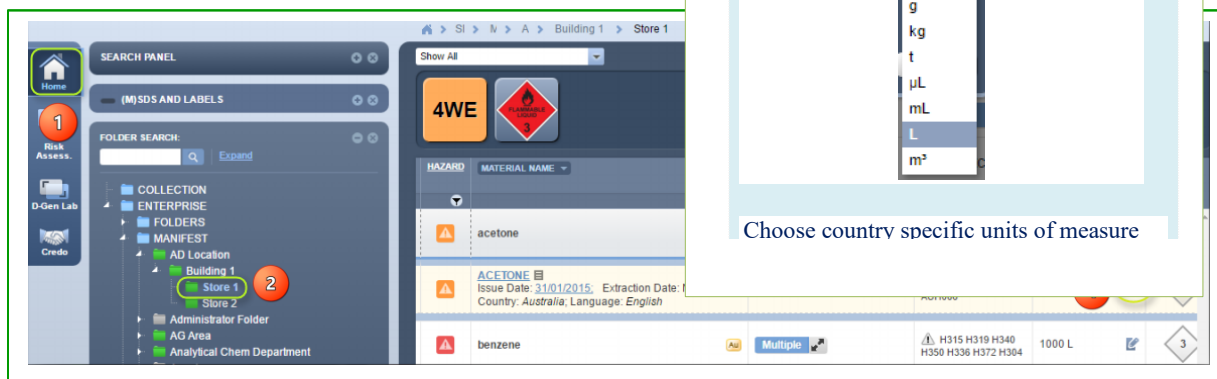
Figure: Edit volume/weight

7. Press on "**Save**" button

8. Check the "**Placard**" generated for the Hazchem sign and note that the default volume/weight is set to filter only **"Current"** amount.

Figure: Edit volume/weight

Units of Measure

Drop down list of units

Display Maximum Volume/Weight

Note that the user can switch the view by displaying Maximum Vol/WT amounts by selecting the drop down arrow (default set to "Current") and click on "Maximum" or Licensed.

Figure: Edit volume/weight

HAZARD	MATERIAL NAME ▾	VENDOR	HAZARD STATEMENT	VOL / WT METRIC ▾ MAX ▾	DG S1 S2
▽		▽	▽		
⚠	acetone	Au	Multiple ⤢	⚠ H319 H336 AUH066	100 L	✎	◇ 3
⚠	ACETONE ▤ Issue Date: 31/01/2015; Extraction Date: None Country: *Australia*; Language: *English*	Chem-Supply	⚠ H319 H336 AUH066	100 L	✎	◇ 3

7.1.2 The Manifest Toolbar Ingredients Filter

The manifest Materials/Ingredients tool allows users to draw respective "**Ingredients**" based on the register of materials in the Manifest/Area/Section/Location (store). Many customers are interested in calculating amounts of specific substances in their stores as part of reporting procedures. Some substances may be strictly regulated and require additional controls to meet respective compliance requirements with respective ingredients' compositions and ingredients amounts.

Materials Ingredients in Manifest Toolbar
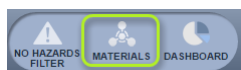
Materials button in the manifest toolbar is set to be default view of chemicals/material names in any list. Selecting the materials button will automatically filter all ingredients and generate a list of materials and ingredients components.

The following steps illustrate 'how to filter for ingredients.

Steps: Filter for Ingredients contained in materials

1. Select the "**Home**" module button 🏠

2. Select "**folder/store**" 📁 name that contains materials

3. Press the '**Materials**' button 🔬 from the manifest tool bar to filter for ingredients

Figure: Filter materials ingredients
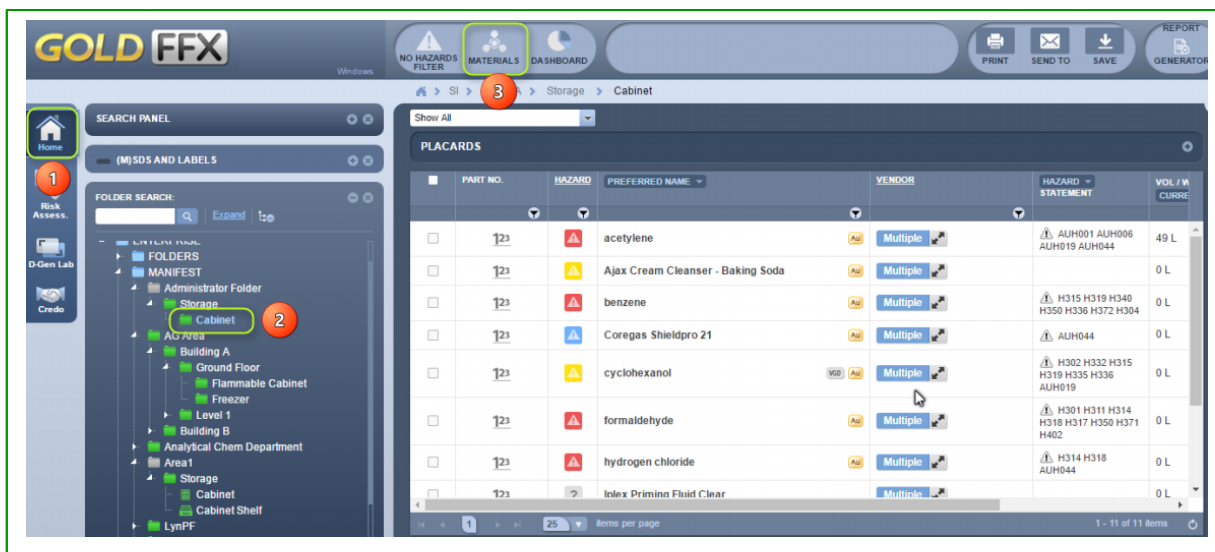
4. Click on the "**Forward Arrow**" icon [▶] next to the material name to expand row to ingredients component(s) and their respective volume/weight

5. Select the "**Print** [🖶] **or** Save/Email" button to create file report on ingredients

6. Select the "**Submit**" button [Submit]

7. Press the [✕] icon to close the print panel

8. Select the "**Ingredients**" button [⚛] from the manifest toolbar to revert to the materials table (initial register of the folder/store inventory)

Figure: Ingredients display and print list
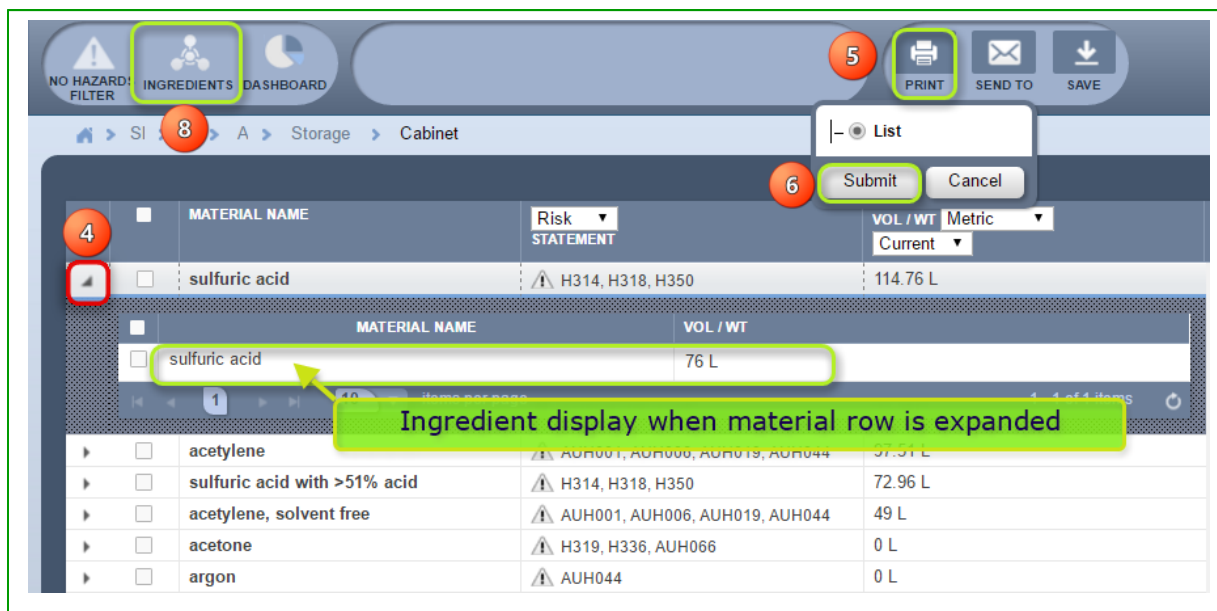
7.1.3   The Manifest Toolbar Hazards Filter

Hazards Filter in Manifest Toolbar

"**No Hazards Filter**" button in the manifest toolbar is set to be the default view. Any list of chemicals can be filtered by selecting the "No Hazards Filter" button to choose an applicable filter criterion.

Hazards Filter Descriptions

Main Filter	Description
No Hazards Filter	Default is set to "No Hazards Filter"
Hazards-All	
Carcinogens	**Filter for any chemical that is classified as a hazardous chemical that can cause cancer due to ability to damage the genome or disruption of cellular metabolic processes.**
Mutagens	**Filter for any chemical agent that changes the genetic material of an organism and increases the frequency of mutations above natural level.**
Sensitisers	**Filter for any chemical that causes allergic reaction in normal tissue after exposure.**
Corrosives	**Filter for any chemical that will destroy and damage living tissue and other substances during contact. Corrosive substances cause chemical burns on contact.**
Peroxide Formers	**Filter for materials that are susceptible to peroxide formation, which are ones that typically react with air, moisture or impurities and produce a change in their chemical composition in normal storage.**
	Certain organic solvents are susceptible to peroxide formation and can form potentially explosive peroxides over time. Peroxide forming chemicals are divided into three classes:
	Class A: Chemicals that form explosive levels of peroxides without concentration. These are the most hazardous and can form explosive peroxide levels even if not opened.
	Class B: Chemicals that form explosive levels of peroxides when concentrated through distillation, evaporation or exposure to air after opening.
	Class C: Chemicals which are a hazard due to peroxide initiation of polymerization.
Reprotoxins	**Filter for any hazardous substance associated with interference of the sexual reproductive system, fertility in adults and offspring.**
Embryotoxins	**Filter for any toxic chemical with adverse effects on the embryo.**
	When this substance enters the maternal system and crosses the placental barrier; the effects

	of the substance may be expressed as embryonic death or abnormal development of one or more body systems, and can be deleterious to maternal health.
Neurotoxins	**Filter for any class of exogenous chemical neurological insult (cause of physical or mental injury) which can adversely affect bodily function and the nervous tissue.**
Cardiotoxins	**Filter for any chemical that may induce cardiac failure.** Cardiotoxicity is the occurrence of heart electrophysiology or muscle damage. When the heart is affected by cardiotoxins, it becomes weaker and inefficient in pumping blood and hence affects blood circulation such as heavy metals or incorrectly administered drugs.
Liver Toxins	**Filter for any chemical that may cause injury to the liver, which may manifest as abnormal liver enzyme or be the cause of liver failure.**
Kidney Toxins	**Filter for any chemical that bare poisonous toxic effect on kidneys (also known as nephrotoxicity).** These sort of chemicals may include specific drugs used for medication purposes
Cytotoxins	**Filter for any chemical that has the quality of being toxic to cells.**
Hazard-Health	**Filter by any chemical that is classified as a health hazard.** These type of chemicals will affect human health such as carcinogens, etc.
Hazard-Environment	**Filter by any chemical that is classified as an environmental hazard.** These type of chemicals will affect the environment
Hazard-Physical	**Filter by any chemical that is classified as a physical hazard.** These type of chemicals are considered to flammable to some degree, etc.
Dangerous Goods-All	**Filter by any chemical that is classified as a dangerous good.** Dangerous goods are substances, mixtures or articles that, because of their physical, chemical (physico-chemical) or acute toxicity properties, present an immediate hazard/danger to people, property or the environment.
Dangerous Goods Specific	
Corrosives	**Filter for a chemical that is classified to destroy or damage living tissue by direct contact. Some acids, bases, dehydrating agents, oxidizing agents, and organics are corrosives.** *Concentrated acids can cause painful burns that are often superficial. Inorganic hydroxides, however, can cause serious damage to skin tissues because a protective protein layer does not form. Even a dilute solution such as sodium or potassium hydroxide can saponify fat and attack skin. At first, skin contact with phenol may not be painful, but the exposed area may turn white due to the severe burn. Systemic poisoning may also result from dermal exposure*
Explosive Flammables	**Filter for a hazard chemical, dangerous good classified as explosive flammable.** These are hazardous chemicals that may cause an explosion by heating, severe projection,

	explosion, a blast or fire or may mass explode in fire. *Explosive substances can form an explosive atmosphere of gas, vapour or dust. This class also includes substances and articles produced for an explosive or pyrotechnic effect. Flammable chemicals are classified according to flashpoint, boiling point, ignition temperature. Flashpoint (FP) is the lowest temperature at which a flammable liquid gives off sufficient vapour to ignite. Boiling point (BP) is the temperature at which the vapour pressure of a liquid is equal to the atmospheric pressure under which the liquid vaporizes. Flammable liquids with low BP's generally present special fire hazards. The FP's and BP's of certain chemicals are closely linked to their ignition temperature — the lowest temperature at which a chemical will ignite and burn independently of its heat source.*
Miscellaneous	**Filter for substances and articles that present a danger especially during transport, not covered by other dangerous goods classes other than DG Class9**.
Oxidisers	**Filter for dangerous materials which act as an oxidizing agent.** A substance that is not necessarily combustible, but may, generally by yielding oxygen, cause or contribute to the combustion of other material. By this definition some materials that are classified as oxidising agents by analytical chemists but are not classified as oxidising agents in a dangerous materials sense.
Toxic/Harmful	**Filter for dangerous materials that are classified as toxic/harmful.** Toxic materials have a specific degree of damage and have adverse effects on a substructure of an organism exposed to these types of substances. *Chemical toxicants include inorganic substances such as lead, mercury, hydrofluoric acid, and chlorine gas, and organic compounds such as methyl alcohol, most medications, and poisons from living things. Radioactive chemicals are not poisonous because of their chemical nature, but because radiations emitted by nuclei are highly energetic, and destroy cells and tissues, but radioactive toxicity should not be comprehended in chemical toxicity.*
Radioactive	**Filter for any substance classified as a radioactive, e.g. plutonium, uranium**. These types of substances emit radiation upon decay. Radioactive decay random at single atom levels and difficult to predict when an atom will decay even though the decay rate or activity is characterized by constant quantities; its half-life, decay constant, mean time. The genetic and biological effects of radiation include cancer.
Water-Reactive	**Filter for any chemical that undergoes spontaneous reaction when in contact with water molecules**, notably alkali metals from sodium through cesium. Some water reactive substances are also considered to be pyrophoric (substances that ignite in contact with air at or below 54.55°C (130.19° C). Alkali metals are usually stored in containers with oil to protect the metal as a barrier to prevent a reaction between water and these metals.
None-Hazardous	**Filter for any substance classified as non-hazardous.**

None -Dangerous	Filter for any substance classified as non-dangerous.
Reducing Agents	**Filter for any substance or compound that is a reducer or reductant**. A reducer is an electron donor and notably, strong reducing agents easily lose or donate electrons in redox reactions (reduction-oxidation); and are subsequently oxidized. Examples of reducing agents include the earth metals, formic acid, and sulfite compounds.
Chemicals of concern-DHS	**Filter for chemicals of concern based on the United States Department of Homeland Security list of chemicals covered under the EPA program, Chemicals Weapons Convention**, hazardous materials such as gases poisonous by inhalation and explosives regulated by Department of Transport.
Chemicals of concern-LoC	Filter for chemicals of concern by Level of Concern (Loc), which is based on a threshold value of a hazard (toxicity, flammability, thermal radiation or over exposure) – US Department of Commerce : Office of Response and Restoration
Health Surveillance Filter	**Filter for chemicals requiring health surveillance** as part of an integrated approach to the control of hazardous substances, where; exposure poses significant risk to health.
Biological Monitoring	Filter for chemicals requiring biological exposure monitoring. Biological exposure monitoring is the measuring and evaluation of the chemical or its metabolites in body tissues, body fluids (urine, blood) or exhaled breath.
SARA (Superfund Amendments and Reauthorization Act of 1986).	**Filter a list of all chemicals and hazardous substances (United States SARA Reporting) required according to the threshold quantities**, including: Common name, Chemical Abstract Services (CAS) number, Physical state, Physical and/or Health Hazards – these are divided into five categories. Physical hazards are Fire, Sudden Release of Pressure and Reactivity. Health hazards are Immediate (Acute) or Delayed (Chronic). This act amended the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as Superfund. **Inventory Information** – this includes the maximum daily amount, the average daily amount and the number of days on site. **Storage Information** – this includes container type, pressure, temperature, specific information on storage amounts and locations. **Certification** – The owner or operator or the officially designed representative of the owner or operator must certify that all information included in the Tier II submission is true, accurate and complete. See more at: emergency Planning and Community Right to Know Act http://www2.epa.gov/epcra-tier-i-and-tier-ii-reporting US Environmental Protection Agency Tier Reporting by State http://www2.epa.gov/epcra/state-tier-ii-reporting-requirements-and-procedures
Phase-out	**Filter for any "Phase-out" materials.**

	These materials are products that contain ingredients in the manifest that have been marked as phase out. The phase-out menu option is available in "Own" inventory and its subject to pure substances that are marked in the Chemwatch database with respect to Annex XIV substances and those that are manually marked by user through the mouse click context menu. Annex XIV substances are those substances that are marked by default as they appear in the List of Substances subject to Authorization in accordance with the European Regulation (EC) No 1907/2006.
COMAH	**Filter for products that are listed in the COMAH database**. COMAH products are those substances that contain at least one ingredient from the "UK The Control of Major Accident Hazards Regulations (COMAH) - Dangerous Substances and Threshold Quantities") with respect to the calculation of ingredient amount in mixture/product.
VOC	(The Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management was enacted in 1999 for the purposes of promoting an improvement of voluntary management of chemical substances by business operators and preventing any impediment to the preservation of the environment). **Filter for ingredients that are classed as "Volatile Organic Compounds"**. Notably. VOC products are derived from boing point threshold and if there's no boiling point or a range. Consideration is prioritized to lowest value in the boiling point range if product has a boiling point.
Japan PRTR Law	Filter for substance classified as Class 1 or Class 2 based on the disclosure percentage (%) of ingredients within a mixture. If there are products in the Manifest that do not have volumes assigned to them, then the system will provide the relevant message. **Class I Substances** Designated Chemical Substances are chemical substances that may harm human health, may pose a risk of interfering with the inhabitation and/or growth of flora and fauna, and may deplete the ozone layer, and that are considered to be persistent over a substantially extensive area in the environment considered from the physical and chemical properties, the amount manufactured, imported, and used. Substances are designated in Article 1 of the Order for Enforcement of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof, based on Paragraph (2) of Article 2 of the same Act. **Class II Substances** Designated Chemical Substances are chemical substances that may have the same requirements as the Class I Designated Chemical Substances considering the increases in

	amounts manufactured, imported, or used. Substances are designated in Article 2 of the Order for Enforcement of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof, based on Paragraph (3) of Article 2 of the same Act.
Health Surveillance Report	Report for Filter for chemicals requiring health surveillance as part of an integrated approach to the control of hazardous substances where exposure poses significant risk to health.
Incompatibility Report	Filter by this type of report to compare compatibility of dangerous goods in an Area\Section\Location. The report provides DG classes' compatibility or segregation required as per the materials in a location in your Manifest. **Notes for consideration** • In most cases materials of the same class will be compatible. However, not all materials with different *UN Numbers* will always be compatible. The SDS should be checked. • In many cases the goods will be compatible. Must check for subsidiary risk compatibility and the SDS. • If one of the goods present is also a fire risk substance (one of class 2.1, 3, 4, 5, a combustible liquid or has a subsidiary risk of one of these) or elevated temperature goods, segregation is required by at least 3 m or more. Sub-risk MUST be considered. Other exceptions apply. Check the SDS. • Not all class 5.1 goods are compatible as follows: Ammonium nitrate is not compatible with tetranitromethane, dichloroisocyanuric acid, any bromate, chlorate, chlorite, hypochlorites, or chloroisocyanurate, or any inorganic nitrate. Calcium hypochlorite (and its mixtures) is incompatible with dichloroisocyanuric acid, ammonium nitrate, or any chloroisocyanurate. • Organic peroxides are highly reactive materials. Please check the SDS to ensure compatibility. • Where one of the goods to be stored together is a concentrated strong acid and the other a concentrated strong alkali, they should be deemed incompatible. • Class 4.3 goods must not be stored next to goods that are in a solution containing water, or where water or foam is the chosen firefighting/spill/leak dispersal or suppression media for the storage area. Note: Except where the class 6.1 is cyanide and the class 8 an acid. Check the SDS
REACH Uses (Registration, Evaluation,	**Filter by REACH Uses.** REACH is the regulation of the European Union, which was adopted to improve the protection of human health and the environment from potential risks by the chemical.

Authorisation and Restriction of Chemicals in the European Union)	REACH applies to all chemical substances used in industry and daily activities, chemicals such as cleaning products, paints, articles – clothes, furniture, electrical appliances and many more. For more background information understanding REACH, visit the page by clicking here. The Manifest module, when in folder view mode, contains a "No Hazard Filter" button in the Manifest Toolbar, which by default shows button - *No Hazard Filter*. REACH will also force the use of substances to be phased out, especially toxic substances in products other than those ingested.
Major Hazard Facility	**Filter by Major Hazard Facility rules for materials stored in large quantities,** which are vital for Australian regulators when checking for compliance requirements, especially in prevention of major accidents and near misses, minimize the hazardous effects to the PCBU, people and the surrounding environment.
Pending Data Extraction	**Filter by for materials that have pending data extraction.** These are materials that are not designated with a VGD (Vendor Gold Data) icon in the materials list and have not yet been full extracted for classification data.

The following steps illustrate 'how to filter for carcinogens.

Steps: Filter for carcinogens in the materials list

1. Select the "**Home**" module button 🏠
2. Select "**folder/store**" 📁 name that contains materials
3. Press the "**No Hazards**" 🔺 filter button from the manifest tool bar
4. Hover mouse pointer over "**Hazards-Specific**"
5. Select **"Carcinogens"** option to filter for carcinogenic materials
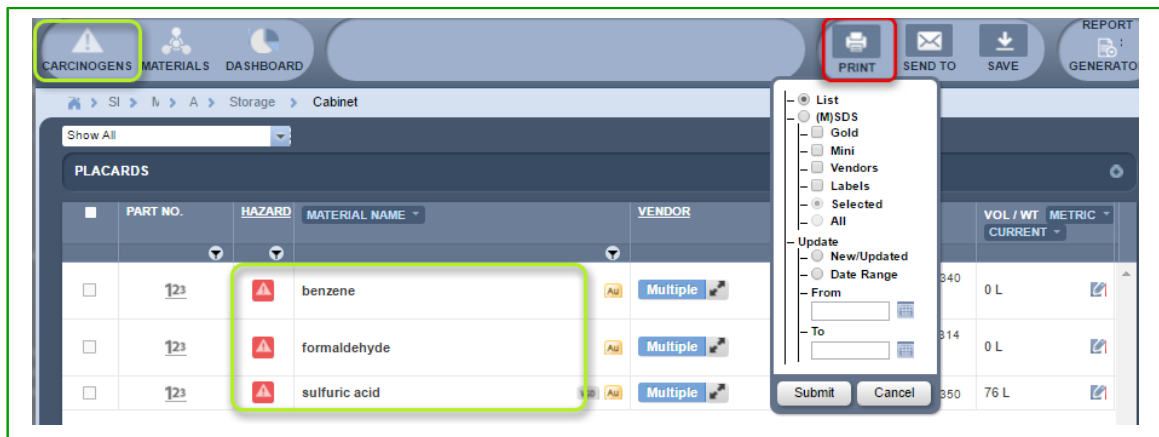
Figure: Filter materials ingredients
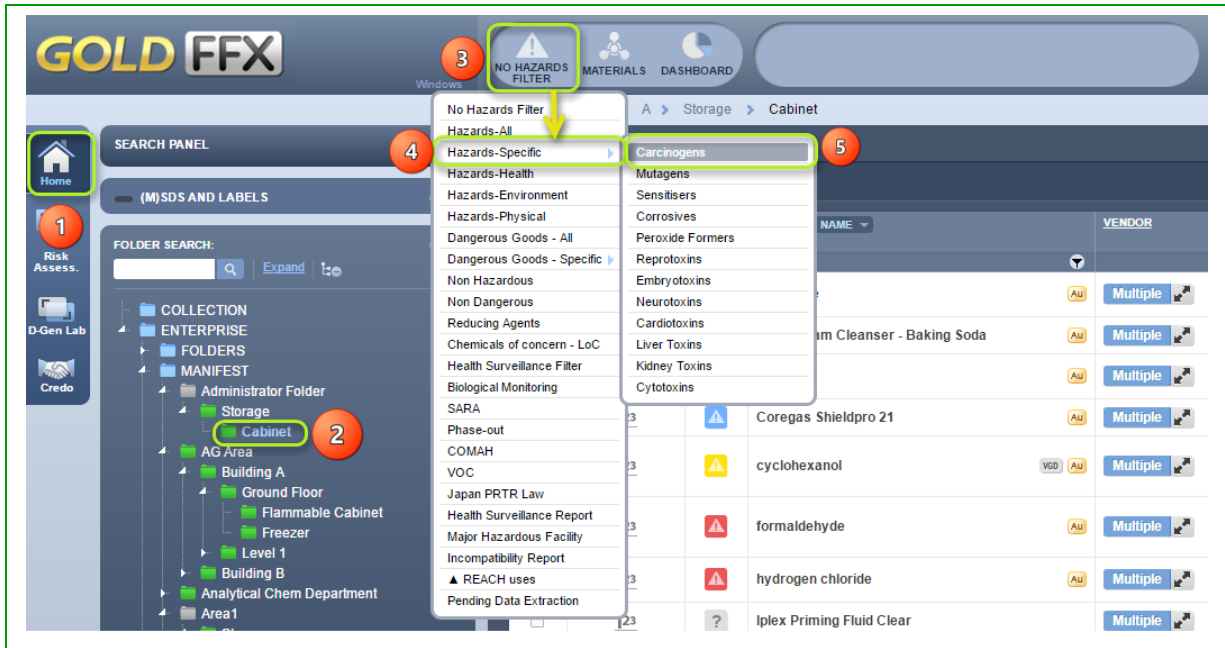
6. Select the "**Print** 🖶 **or** Save/Email" button to create file report for the filtered carcinogenic material found in the location folder/store

Figure: Print list of filtered carcinogens

Filter by Incompatibility Report

WHS Regulation 2011, Australia; requires that workplaces where chemicals are stored, used or handled must have systems and procedures in place to prevent incompatible material from interacting. Note that each chemical has a relative *reactivity* rating and stability as per chemical properties. It is important to consider storage incompatibility for hazardous chemicals to avoid accidents, fire, chemical spills contamination and any other unforeseen incidences. The GoldFFX application utilises the Incompatibility Report

from the Hazards Filter to be able to generate a report based on the **Segregation,** which is only a guide and not meant to replace an (M)SDS or a risk assessment. Further guidance on storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers can be found in the *Australian Standard AS3833*.

Incompatibility Report in Manifest Toolbar

The **"Incompatibility Report"** is a summary of storage incompatibility based on dangerous goods classes and packing groups. Each chemical in the store is checked in combination with all other chemicals for any incompatibilities. This logic includes all subsidiary nodes if the report is generated from a parent folder. The report provides segregation guidance notes for incompatible goods through an information icon tag [i]. There are three primary categories used for the incompatibility conclusion.

- **Compatible** - chemicals can be stored together with other chemicals in store
- **Incompatibilities may exist** - provided the chemicals falls under the same class
- **Segregation** - chemicals must be separated by a specific distance apart from each other

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The incompatibility report will specify the respective segregation class based on the following **"Segregation Class Guidance"**. Refer to the appendix compatibility chart key for more details.

Segregation Class	Segregation Guidance Notes
S1	Segregate these goods by 3m or more in a well-ventilated area. For liquid dangerous goods the distance is measured from the edge of the spill catchment area. See supplementary notes 6 and 7.
S2	Segregate by 5 m or more. If one of the dangerous goods is a liquid, measure the distance from the edge of the spill catchment area. Liquid dangerous goods should be located within a separate spill catchment area. See supplementary notes 6 and 7.
S3	Segregate by 3 m or more for PG III goods and 5m or more for PG II, PG I goods or where the goods may react dangerously. If both are solids then a minimum of 1m separation may be used. Where one of the goods is a liquid the distance is measured from the edge of the spill catchment area. See supplementary notes 6 and 7.
S4	Segregation preferred by the use of fire-rated partitioned areas. Consider use of separate detached building for organic peroxides and for highly pyrophoric class 4.2 goods.
S5	Segregation of class 4.3 preferred by use of a separate, detached building without water based fire suppression system.

The following steps illustrate "how to generate an incompatibility report for chemicals in a store".

Steps: Filter for an Incompatibility Report

1. Select the "**Home**" module button 🏠

2. Select "**folder/store**" 📁 name that contains materials

3. Press the **"No Hazards"** ⚠ filter button from the manifest tool bar

4. Select the "**Incompatibility Report**" filter from the hazards filter menu

Figure: Filter by Incompatibility Report
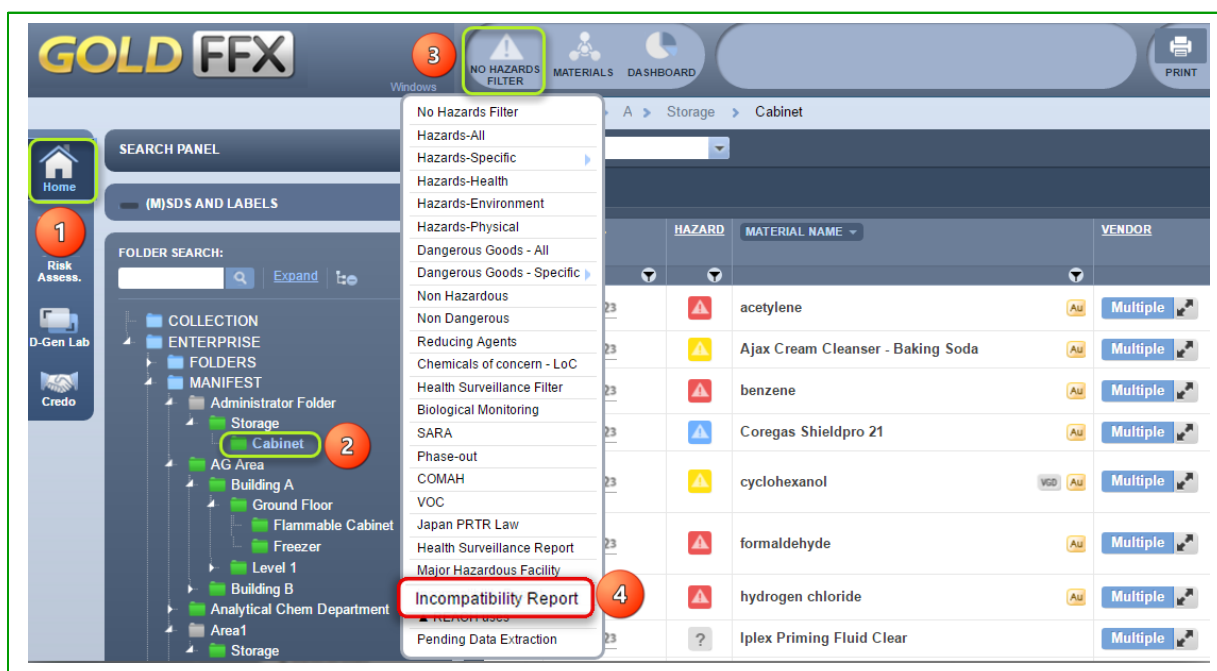
5. Hover mouse pointer onto the ***information*** icon 🄸 to display recommended segregation requirements

6. Scroll down the report to view "**Supplementary Notes**" if applicable to found incompatibilities

7. Select the "**Print** 🖨 **or** Save/Email" button to create file report for the filtered incompatibility report for the location folder/store.
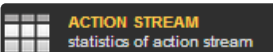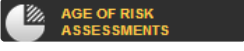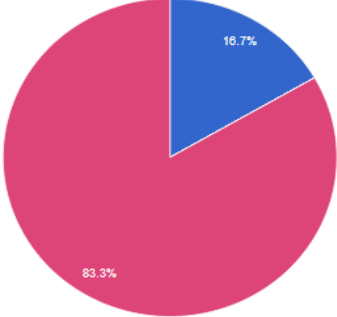
Figure: Incompatibility Report display

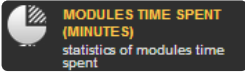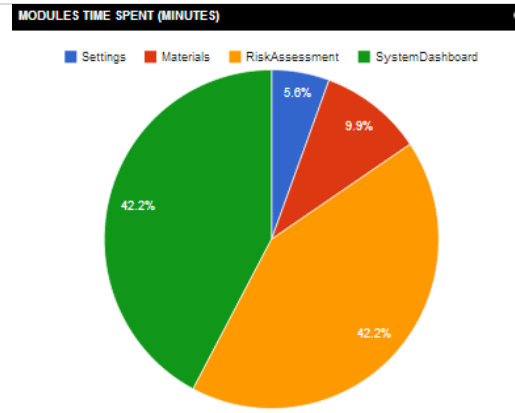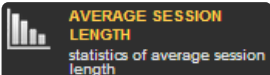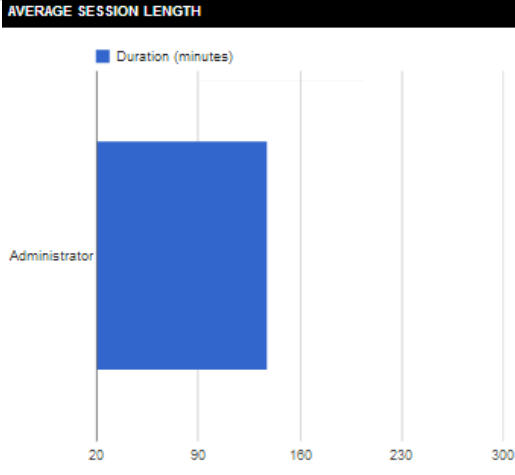### 7.1.4   The Manifest Toolbar Dashboards

A dashboard is a simplified way of accessing real-time data through widgets. The data information is displayed as statistical data using graphs, pie charts and tables. Note that the dashboard feature is accessible to users that have been permitted access by the system's administrator. The common practice is limited to users with site management role within the business or institution or generally assigned to users who are responsible for environment, health and safety within the workplace.
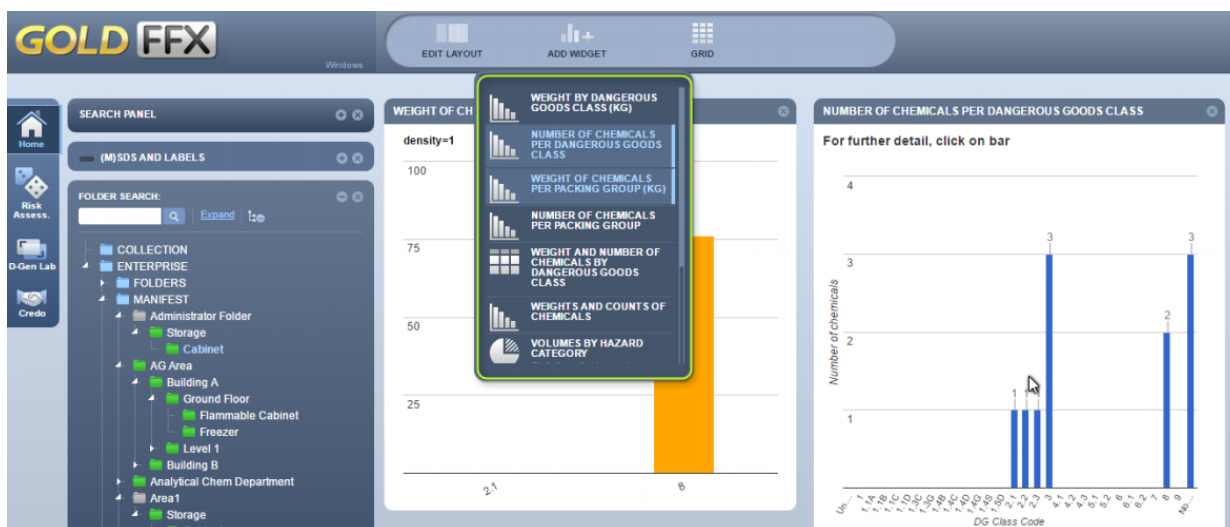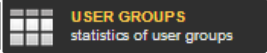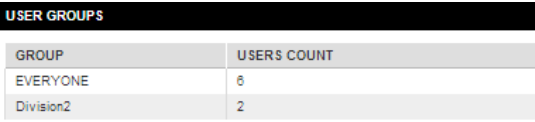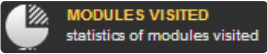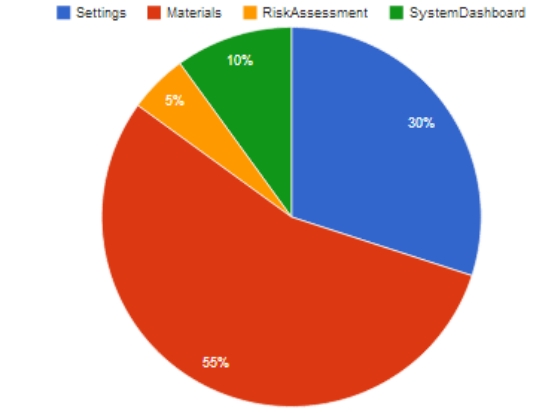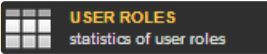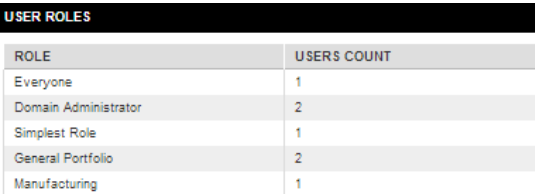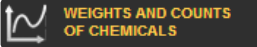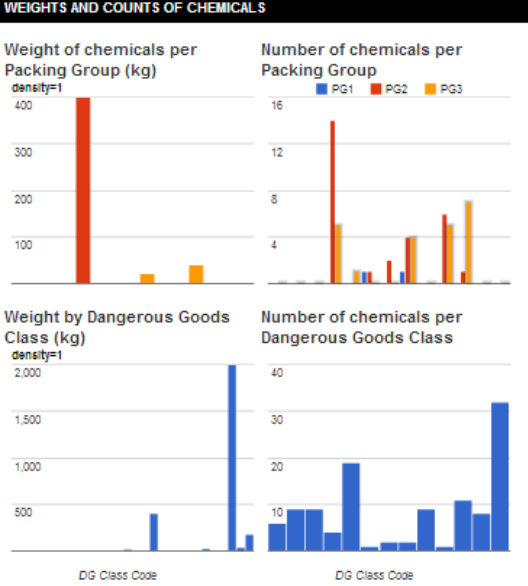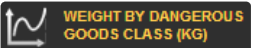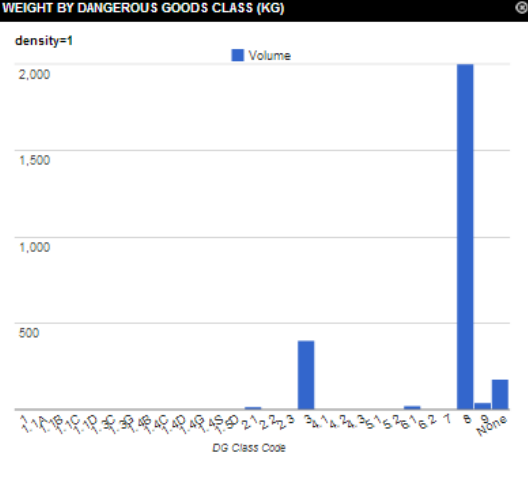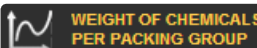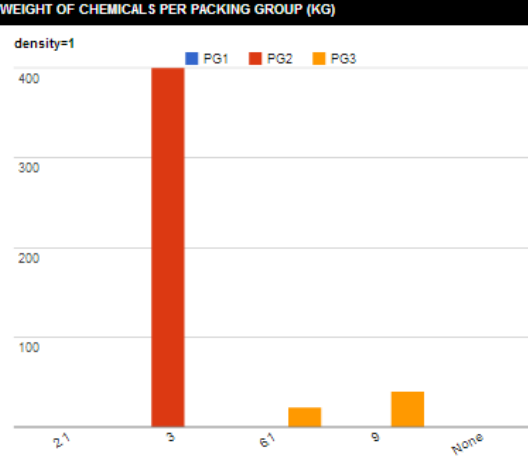
The table below provides a summary of each widget report.

Item	Widget	Type Data	Data Display
1.	DAILY LOGINS statistics of daily logins	Graphical presentation for daily login counts per date.	
2.	DAILY ACTIONS statistics of daily actions	Graphical presentation for daily activities per date. The highest peak on the graph show the largest count of the date or the busiest date on that particular day.	

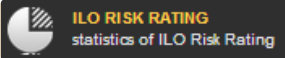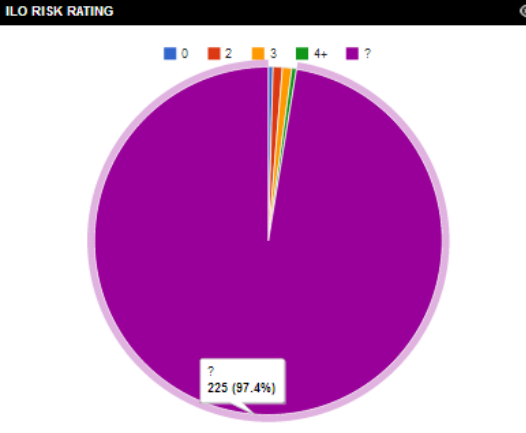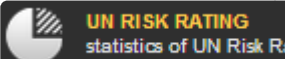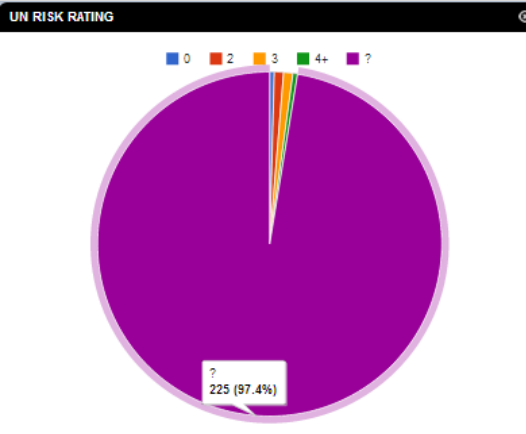| #	Icon	Description	Screenshot
3.	DATABASE COUNTS — statistics of database counts	Total number of users versus active users, total number of materials and Vendor MSDS actioned.	**DATABASE COUNTS** — TOTAL USERS 7, ACTIVE USERS 4, MATERIALS 113, VENDOR (M)SDS 261
4.	LATEST LOGINS — statistics of latest logins	Table listing of user name logins with date and time as per latest period.	**LATEST LOGINS** — administrator entries Nov 6, 2013 (4:37:23 AM, 4:37:22 AM, 4:37:22 AM, 4:37:13 AM, 3:25:12 AM, 3:25:09 AM, 3:24:43 AM, 3:24:41 AM, 3:24:39 AM, 3:24:38 AM)
5.	LATEST ACTIONS — statistics of latest actions	Table listing of the latest actions conducted by specific user at a certain period (date, time).	**LATEST ACTIONS** — Nov 6, 2013 3:39:27 PM Administrator SaveGlobalFilter; 3:39:27 PM Administrator AddOrUpdateUser; 3:37:22 PM Administrator Login; 3:37:13 PM Administrator Login; 2:25:08 PM Administrator Login
6.	ACTION STREAM — statistics of action stream	The action stream provides activity conducted per user on a specific date and time.	**ACTION STREAM** — Administrator changed settings at 11/6/2013 3:39:27 PM; was added or updated at 11/6/2013 3:39:27 PM; logged in at 11/6/2013 3:37:22 PM; logged in at 11/6/2013 3:37:13 PM; logged in at 11/6/2013 2:25:08 PM; logged in at 11/6/2013 2:24:40 PM
7.	AGE OF RISK ASSESSMENTS	Pie Chart provides numerical proportions for the age of the risk assessments from a total count of available completed risk assessments for applicable materials. Note that *yearly* key indicator by year are used for calculation.	**AGE OF RISK ASSESSMENTS** — TOTAL COUNT: 6. Legend: <1 year, >=1 years and <2 ye..., >=2 years and <3 ye... 1/3. Pie: 16.7%, 83.3%

8.	RISK ASSESSMENTS BY DATE statistics of risk assessments by date	Bar graphical presentation of the statistics of risk assessment status using the four key indicators; complete, incomplete, required, review required. *Refer below on descriptions of risk assessment status.*	
9.	INACTIVE USERS statistics of inactive users	Table listing of inactive users and respective last login activity per period (date, time) *to enhance decision point on user activity and necessity of user account.*	
10.	MODULES TIME SPENT (MINUTES) statistics of modules time spent	Time percentiles as per modular activity provision in Pie chart format. Gauge where most resources are spent in each module.	
11.	AVERAGE SESSION LENGTH statistics of average session length	Provides the statistical data for average sessions by length of time spent in minutes. *Here we can clear see that the administrator has spent <160min on average for specific sessions within the program.*	

12.	USER GROUPS statistics of user groups	Provides a statistical profile of user groups currently existing in the system. The group name and number users per group listed in tabular format.	**USER GROUPS** | GROUP	USERS COUNT
EVERYONE	6
Division2	2	
---	---	---	---
13.	MODULES VISITED statistics of modules visited	Pie Chart provides numerical proportions of modules visited by all users within the organisation. *Here, you can simply obtain a summary of modular activity; where most work is carried out in your organisation. Most commonly, users will be searching for materials.*	**MODULES VISITED** Settings ■ Materials ■ RiskAssessment ■ SystemDashboard 10%, 5%, 30%, 55%
14.	USER ROLES statistics of user roles	Provides a statistical profile of users' roles that are currently created in the system. The role names and number of users assigned to each role are listed in tabular format.	**USER ROLES** | ROLE	USERS COUNT
Everyone	1
Domain Administrator	2
Simplest Role	1
General Portfolio	2
Manufacturing	1	

15.	WEIGHTS AND COUNTS OF CHEMICALS	Bar graphs provide statistical data for *weight of chemicals per packing group*, *number of chemicals per packing group*, *Weight of chemicals by dangerous goods class* and *number of chemicals per dangerous goods*. *[The unit of measure is the kilogram]*	
16.	WEIGHT BY DANGEROUS GOODS CLASS (KG)	Bar graph provides statistical data for *weight of dangerous goods class* by volume. *[The unit of measure is the kilogram in the Manifest Module where quantities are entered]*	
17.	WEIGHT OF CHEMICALS PER PACKING GROUP (KG)	Bar graph provides statistical data for *weight of chemicals* per *packing group.* *[The unit of measure is the kilogram in the Manifest Module where quantities are entered]*	

| 18. | **NUMBER OF CHEMICALS PER DANGEROUS GOODS CLASS** | Bar graph provides statistical data for *number of chemicals per dangerous goods class*. | |
| | ▶ *Hovering mouse pointer over a bar shows the number of chemicals for that DG Class* | There are nine DG classes *(DGC 1- 9). For more background information, visit the web;* http://www.unece.org/trans/danger/danger.html | |

| 19. | **VOLUMES BY HAZARD CATEGORY** Statistics of volumes by Hazard Category | Pie chart provides percentile statistical data of volumes by hazard category for all classified materials. | |
| | ▶ *Hovering mouse pointer over a pie slice shows the volume for that catergory* | *Key indicators are the various hazard categories; corrosive, explosive, flammables, extra flammable, environment, oxidizing, toxic, very toxic, irritant and harmful.* | |

| 20. | **WEIGHTS BY HAZARD CATEGORY** statistics of weights by Hazard Category | Pie chart provides percentile statistical data of weight by hazard category for all classified materials. | |
| | ▶ *Hovering mouse pointer over a pie slice shows the weight for that catergory* | *Key indicators are the various hazard categories; corrosive, explosive, flammables, extra flammable, environment, oxidizing, toxic, very toxic, irritant and harmful.* | |

| 21. | ILO RISK RATING
statistics of ILO Risk Rating | Pie chart provides percentile statistical data of the health risk rating for all classified materials.

Risk rating range from unknown (?), 0-4+. Refer to table below for risk rating key indicators for health hazardous chemicals. | |
| 22. | UN RISK RATING
statistics of UN Risk Rating | Pie chart provides percentile statistical data of the dangerous goods risk rating for all classified materials.

Risk rating range from unknown (?), 0-4+. Refer to table below for risk rating key indicators for dangerous goods. | |

Risk Assessment Status Descriptions

Status of Risk Assessment	Icon	Description
Assessment Required		When a material is registered in a folder or stored, the status renders assessment requirement. Copying a material that is already assessed into the same folder or another folder, will also render this status.
Assessment Complete		When a material with known hazards (classification by CW available) has been risk assessed, will render the completion status.
Review Required		When the period of time set for the audit {maximum ≤ 5years} elapses, the status of the assessment will automatically change from complete to "review required".
Assessment Incomplete		When an assessment has not been completed for any reason or the transaction was not finalised in saving the audit appropriately, the application render status incomplete, hence, imperatively important to finalise your risk assessment to complete where necessary.
Note		*Assessment date and review dates will appear in the final risk assessment report. The administrator can utilize the System's Dashboard to obtain an overview or summary of the risk assessment status by date and the respective age of the risk assessments conducted. This type of information can be represented as widgets in specific graphical presentation of required data. See descriptive content on widgets toolkit above.*

Key indicators: Health Risk Assessment Rating (ILO)

Rating	Risk Band Calculation	Colour Code	Risk Band Icon
4+	Extreme	Dark Red	
4	Very High	Red	
3	High	Orange	
2	Moderate	Yellow	
1	Low	Blue	
0	*None*	*Grey*	
?	*Question Mark*	*Dark Grey*	
Notes		*Any material assigned a question mark signifies that it does not have a corresponding Gold MSDS, hence, calculation not available.*	
		The rating {0} applies to a material that is considered to be non-hazardous [Not classified as a hazardous substance or hazardous chemical]. Note that such a material may be classified as a dangerous good. Confirm by checking the MSDS.	

Notes

Key indicators: Dangerous Goods Risk Assessment Rating (UN)

Dangerous Goods Risk Rating Calculation (Storage and Handling)

Hazard Rating	DG Class Grouping Method	Packaging Group	R codes	Additional Data
0	None	None	None	None
1	None	No PG Group		any of R50 or R51 or R52 or R53
2	2.2 or 3 or 4.1 or 4.2 or 4.3 or 5.1	III or None		and / or R44
3	3 or 4.1 or 4.2 or 4.3 or 5.1	II		
4	2.1 or 2.3 or 3 or 4.1 or 4.2 or 4.3 or 5.1 or 5.2	I		
4+	1.1 or 1.2 or 1.3	Not Applicable (DG Class Overrides PG)		

▶ The following matrix provides the calculation of the Risk for DG Storage Scale.

SCALE / DG HAZARD GRP	1 (Haz Grp A) Non-DG or all other	2 (Haz Grp B) PG= III DG Class: 3, 4.1, 4.2, 4.3, 5.1	3 (Haz Grp C) PG= II or N/A DG Class: 3, 4.1, 4.2, 4.3, 5.1	4 (Haz Grp D) PG= I or N/A DG Class: 2.1, 2.3, 3, 4.1, 4.2, 4.3,5.1 , 5.2	4 + (Haz Grp E) DG Class: 1.1 , 1.2 , 1.3
LARGE (Tonnes/Cubic Meters)	1	2	3	4	4+
MEDIUM (Litres/Kilograms)	0	1	2	3	4
SMALL (in Millilitres/Grams)	0	0	1	2	3

The following steps illustrate 'how to generate widget reports.

Steps: Filter for Ingredients contained in materials

1. Select the "**Home"** module button

2. Select "**folder/store**" name that contains materials

3. Note the "**number of materials" registered in the folder** as the report widgets are based on the inventory records of the selected folder

4. Press the '**Dashboard**' button from the manifest tool bar

Figure: Generate dashboard widget report
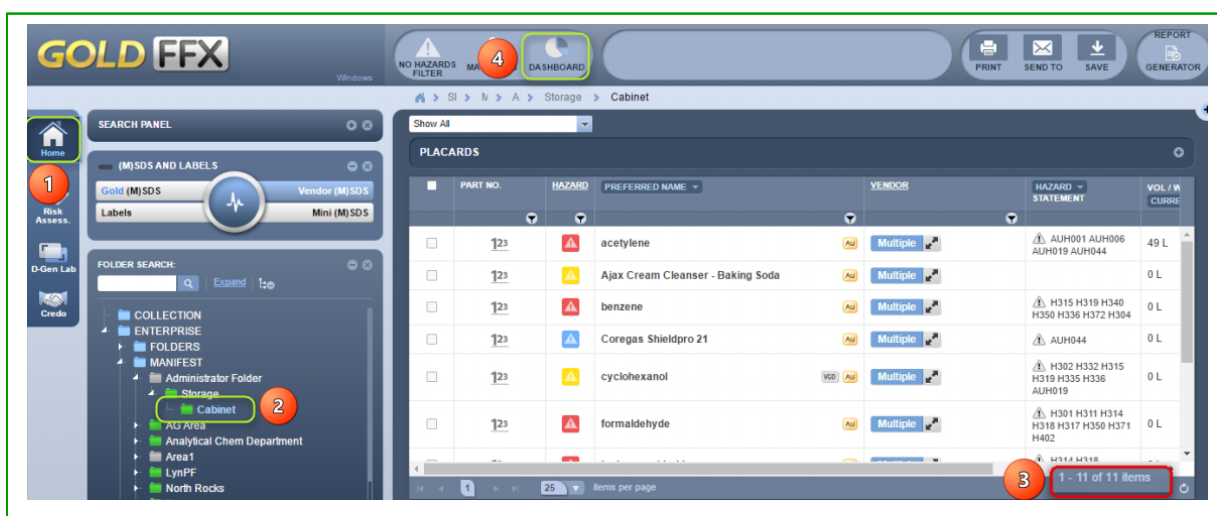
5. Select "**Add Widget**" button to display the widget panel
6. Select the "**Weight By Dangerous Goods Class (KG)** widget
7. Select the "**Weight By Number of Chemicals By Dangerous Goods Class"** widget
8. Select the "**Volume By Hazard Category** widget

9. Select the "**Grid**" button to revert to the material list table

Figure: Add dashboard widgets
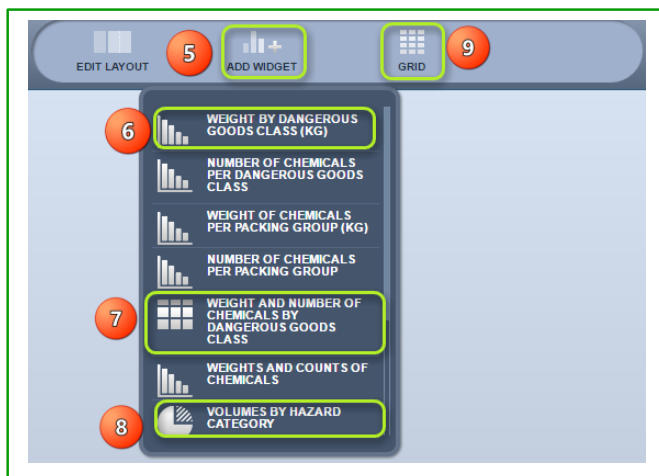
Figure: Widgets reports layout display
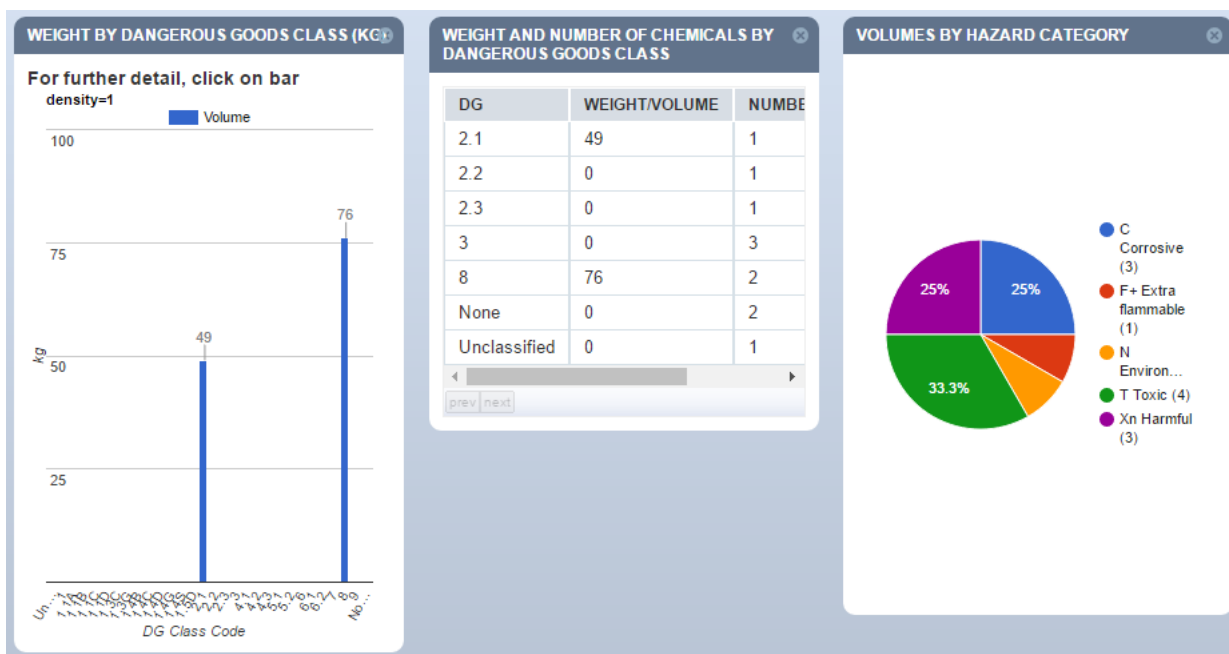
7.1.5   Overview of the Report Generator

The Report Generator Panel contains two tabs; **Basic and Advanced**. The table below provide a summary description of the purpose of these tabs.
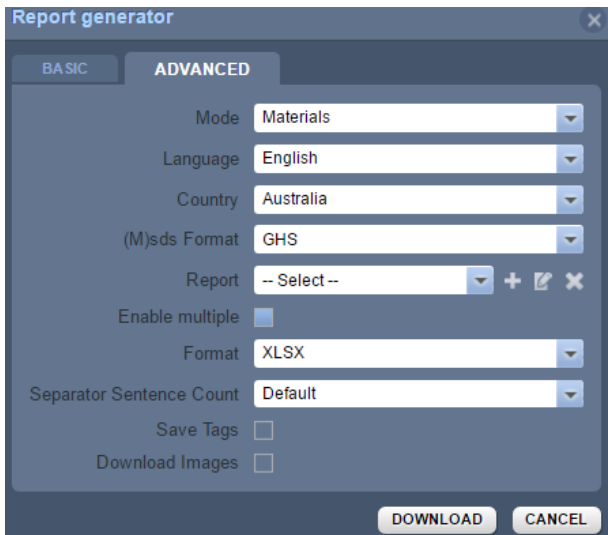
Tab	Description
Basic	Provides access for simple and advanced users to select default templates created by Chemwatch for ease of generating data based on common templates. Simple users will normally be restricted to create report generator templates.
Advanced	Provides access for advanced users to create templates by assigning specific datapoints of interest. In order to be able to create templates, the administrator of the program will assign respective privileges to access and manage the Report Generator Method Builder Tool.

Table: Report Generator Panel Descriptions

Field Name	Field Option(s)	Description
Mode	Materials Manifest	Materials mode generates information based on the datapoint fields assigned to the report template. This mode does not work with volumes datapoints. Manifest mode generates information based on the datapoint fields assigned to the report template with special considerations such as split by row for vendor's field, volumes in folders. This mode works well with volumes datapoints, manifest data for folder under the manifest directory.
Language	List of available languages	Choose a specific language from the drop down list that must be used to generate data
Country	List of Available countries	Choose a specific country from the drop down list of countries to ensure legislative information is based on country specific instrument
(M)SDS Format	Legislative format of (M)SDS data - Local, GHS or REACH Format	The "Format" field allows users to generate data or information based on selected type of (M)SDS classification or legislative instrument based on country/language (jurisdiction). Local = Classification based on the country/language filter for a jurisdiction GHS = Globally Harmonised System for the Classification and Labelling of Hazardous Chemicals, which uses Hazard Codes (Hazard Phrases - H Codes) to communicate hazard information REACH = Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals for the European Union
Report	Report Template Name	This is the report template name saved by user after assigning the required datapoint fields to enable users to generate information or data. Note that the Report Generator Tool is user dependent, which means that the administrator can set users that can create or edit data or simply view and generate reports based on already existing report types. You may also find that the report name can be given as per the type of information required for that report, e.g., Manifest Report - to generate all related manifest data such volume, material classification, folders/stores, vendor, etc.
Add icon	Add New Report Template	The 'Add' icon is used to create new report templates and assign the respective datapoints.
Edit icon	Edit Report Template	Edit an existing report template which already contains datapoint fields
Close icon	Close Report Template	Close currently select Report Template
Enable Multiple	Checkbox selected	Checkbox when selected allows report to generate data whereby if more than one record entry exists such as multiple preferred names, or vendors will be

	or unchecked	generated accordingly.
Format	List of available report format	Drop down arrow list available report format to choose applicable type of format to use to generate data. Available list of format 1. Microsoft excel (XLS) 2. Comma-separated values (CSV) 3. Hypertext Markup Language (HTML) 4. Extensible Markup Language (XML) 5. Microsoft excel (XLSX) For more details. , click on the link here for reference.
Sentence Count	Sentence Number Count for All or specific number	Set the 'Sentence Count' to either default, all or a specific number to count the number of sentence to generate information in the report. Default sentence count is dependent on (M)SDS Settings, whereas 'All' will generate all information in full regardless of the number of sentences. Sentence Count when set to any number between 1-10, will generate the report information by using the sentence count as a rule using a period(.) or full stop at the end of a sentence followed by a space and the first letter (A-Z capital) in the next sentence. For circumstances, where a sentence ends in a question mark? or exclamation mark!, these will also apply the sentence count. Statements or Phrases and abbreviations are delimited. Anything in brackets"()" are ignored including a dot(.). Furthermore, we ignore any dot(.) that appears in text and is a part of a common abbreviation. Common abbreviations may include; Assn. = Association at. no. = atomic number b.p. = boiling point Dr. = doctor e.g. = example
Save Tags	Checkbox selected or unchecked	A selected checkbox generates data from existing tags. Note that Tags have to be created and applied to materials by administrators of the program (tags are user dependent). A tag is a piece of information that can be used for various purposes to highlight or alert users about the nature of the chemical or can be as specific as possible to communicate information to users of materials at the workplace.
Download Images	Download graphics	Allows users to generate images or graphical information as pictures. This option is only applicable to available images in related file format such as png.

		Report Generator Modes Summary		
Item	**Basic Mode**	**Basic Template(s)**	**Advanced Mode**	**Advanced Template(s)**
Description	Basic features pre-built reports that Chemwatch has created, based on data points. These reports cannot be edited by default. If a basic user requires a specific type of report with relevant data and cannot find the datapoints of interest within that basic template; consult the administrator. If unsure, contact helpdesk@chemwatch.net for more information.	BASIC Materials Template, Manifest Volumes and Locations, Manifest DG Report	Advanced users will be able to create and/or edit templates based on required datapoints. Recommended that this feature be assigned to only those users who have some type of role to manage report generator templates that will be used within the entire organisation or sites. This is to ensure that only those super users (advanced) will determine what type of datapoints and reports are required for reporting purposes or audits.	ADVANCED Advanced users will create their own templates at this time. However, Chemwatch is currently building new advanced templates to be available in the near future.
Role	Basic users can only be assigned to access the basic feature to generate data based on the default template(s) already created by the administrator or any other user with report generator rights.	Templates can be generated in various formats; xls, html, csv, xml, xlsx	Advanced users will be assigned the "Advanced Report Generator" privilege by the administrator. Recommend to create a role and link the role with the respective privilege to super users.	Templates can be generated in various formats; xls, html, csv, xml, xlsx

Method Builder: *Report Generator Parent Directory Datapoints*
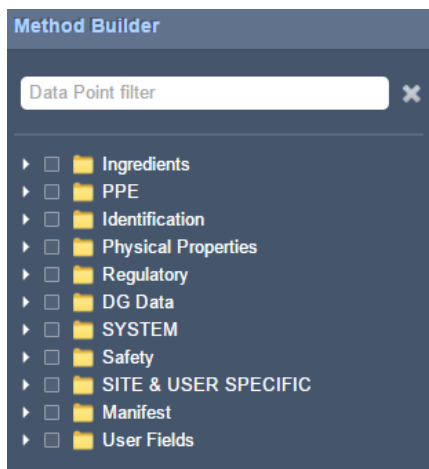
Parent Directory	Description
Ingredients	Provides ingredients options to select datapoint fields
PPE	Provides Personal Protective Equipment datapoint fields
Identification	Provides datapoints that can be used for the identification of the chemicals
Physical Properties	Provides datapoints for the physical properties of the chemicals
Regulatory	Provides datapoints on global, regional and country specific regulatory lists
DG Data	Provides dangerous goods datapoints fields
System	Provides system's datapoints. Generally used internal in Chemwatch
Safety	Provides safety datapoints
Site & User Specific	Provides site & user specific datapoints
Manifest	Provides manifest related datapoints
User Fields	All user dependent fields are available for generating user related information

The Report Generator File Format Summary Descriptions

File Format	File Extension	Description
Microsoft excel **(XLS)**	.xls	XLS file is a spreadsheet format in MS windows and Mac OS which features calcualtion tools and graphical tools, pivot tables and used as an industry standard for spreadsheets. This type of format uses grid *cells* arranged in numbered *rows* and letter-named *columns* to organize data.
Report Generator XLS Example Report		

Comma separated values (CSV) recommended	.csv	CSV file consists of any number of records separated by line breaks of some kind; each record consists of fields separated by some other character or string, most commonly a literal comma or tab Usually, all records have an identical sequence of fields. CSV is a delimited data format that as fields or columns separated by the comma character and records/rows terminated by newlines and can apply own separator.

Report Generator CSVExample Report

File Format	File Extension	Description
HyperText Markup Language (HTML)	.html	HTML file is a webpage format file that can be displayed in a web browser. HTML allows data text, images and objects to be embedded and supports various languages. Supports common browsers; google chrome, firefox and internet explorer.

Report Generator HTML Example Report

Field Name	Field Value
ShippingName	Not Applicable
Suppliers	1 Ashland (Valvoline Pty Ltd) Australia Wetherill Park NSW 30 Davis Road 2164 +61 2 9609 7999 +61 2 9604 5127 technical@valvoline.com.au http://www.valvoline.com/trade-partners/worldwide-distributors/asia-pacific/
DGC	None
PackingGroup	
Vendor	Ashland
VersionNumber	4.1.1.1
IngredientProportion	
IssueDate	01/08/2013
PoisonSchedule	None
ChemicalName	Not Applicable
MaterialName	Valvoline HP Gear Oil 80W90
UN	None
Ingredients	ingredients determined not to be hazardous [manufacturer], , 100
AVG_VOLUME	0
MAX_VOLUME	0
MANIFEST_DATA	1 1 1239728 1239728 4681270 02-1064 Valvoline HP Gear Oil 80W90 None CW CW 2 None None R22? R33? R37? R66? None Liquid 200 0 0 0 1 0 0 1 0 0 0 0 1 0 1
LOCATION	/Huntingwood
Field Name	**Field Value**
ShippingName	Not Applicable
Suppliers	1 Sigma-Aldrich Australia Castle Hill NSW 12 Anella Avenue 2154 +61 2 9841 0555|1800 800 097 1800 448 456 +61 2 9841 0500 ausmail@sial.com www.sigma-aldrich.com 2 Recochem (PG Enterprises) Australia Wembley WA 6014 +61 8 9284 9911 3 Vintessential Laboratories Australia DROMANA VIC 32 BRASSER AVENUE 3936 +61 3 5987 2242 +61 405 318 590 +61 3 5987 3303 4 Bristow Helicopters Australia Australia Redcliffe WA 130 Fauntleroy Avenue 6104 +61 8 9478 3388 1800 039 008,+61 3 9573 3112 +61 8 9478 3844 5 Glendale Packaging Australia Wetherill Park NSW 1/75 Newton Road 2164 +61 2 9756 2315 +61 2 9756 2316 sales@glendalepacking.com 6 Honeywell United States Morristown NJ 101 Columbia Road 07962-1053 +1 800 707 4555

Extensible Markup Language (XML)	.xml	XML file can be used through the internet. It uses textual data format via Unicode for global languages. XML-based formats have become the default for many office-productivity tools, including Microsoft Office (Office Open XML), OpenOffice.org Apple iWork. XML has also been employed as the base language for communication protocols, such as XMPP. Applications for the Microsoft .NET Framework use XML files for configuration.

Report Generator XML Example Report

```
This XML file does not appear to have any style information associated with it. The document tree is shown below.

▼<ArrayOfMaterialData xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  ▼<MaterialData>
    ▼<Field>
       <FieldName>ShippingName</FieldName>
       <Value>Not Applicable</Value>
     </Field>
    ▼<Field>
       <FieldName>Suppliers</FieldName>
      ▼<Value>
         <Suppliers> <Supplier> <OrderNumber>1</OrderNumber> <Name>Ashland (Valvoline Pty Ltd)</Name> <Country>Australia</Country> <Suburb>Wetherill Park</Suburb>
         <State>NSW</State> <Street>30 Davis Road</Street> <Postcode>2164</Postcode> <Telephone>+61 2 9609 7999</Telephone> <Fax>+61 2 9604 5127</Fax>
         <Email>technical@valvoline.com.au</Email> <Website>http://www.valvoline.com/trade-partners/worldwide-distributors/asia-pacific/</Website> </Supplier>
         </Suppliers>
       </Value>
     </Field>
```

7.1.5.1 Export Data using Report Generator Basic Template

The following steps illustrate 'how to export data.

Steps: Export data using the Report Generator Basic Template

1. Select the "**Home**" module button 🏠

2. Select "**folder/store**" 📁 name that contains materials

3. Note the "***number of materials" registered in the folder*** as the report widgets are based on the inventory records of the selected folder

4. Press the '**Report Generator**' button on the top right corner of the interface

---

Report Generator Permission

 The **"Report Generator"** may not be available to all users of the system due to permission rights. The domain administrator of the system can allow specific users to access and create report generator templates for other users to read and generate reports based on the default templates. If the Report Generator button is not available in the user interface, this means that the tool has not been activated for that user.

Figure: Generate dashboard widget report

5. Select "**Current Page**" radio button to use the data from the current materials list in the page
6. Select the "**OK"** button to load Report Generator panel
7. Select the "**Basic tab"** to activate basic mode
8. Select the "**Report drop down arrow"** icon to choose a basic report template name
9. Select the "**Country drop down arrow"** icon to assign country

10. Select the "**Language drop down arrow**" icon ⏷ to assign language

11. Select the **"(M)sds format drop down arrow"** icon ⏷ to assign (M)sds Format

12. Select the "**drop down arrow**" icon ⏷ to assign the file format

13. Select the "**download images**" checkbox to include any images for applicable graphics datapoints

14. Select the "**download**" button to export data based on the default report template

15. *Confirm download folder location name* from the desktop or laptop save as mode

16. Change the *file name of the report*, e.g. Manifest Volumes and Locations (which the name of the default report template assigned in step 7 above)

17. Check the *file type to save as in excel file format*

18. Click **"Save"** button.

Figure: Save export file based on default basic report template

19. Open downloaded file from the desktop download task bar
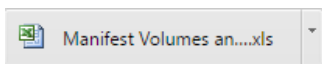
20. Microsoft message may display depending on the desktop excel program settings, select yes to complete the task
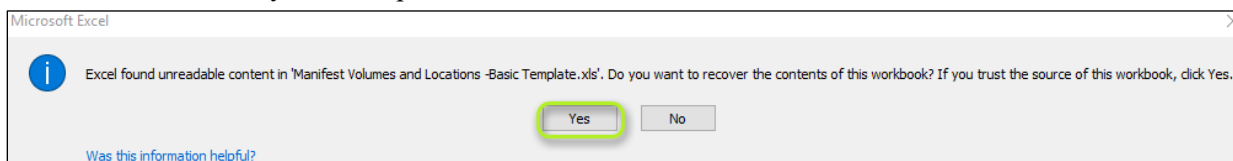
7.1.5.2   Export Data using Report Generator Advanced Template

The following steps illustrate 'how to export data.

Steps: Export data using the Report Generator Advanced mode

1. Select the "**Home**" module button

2. Select "**folder/store**" name that contains materials

3. Note the "***number of materials" registered in the folder*** as the report widgets are based on the inventory records of the selected folder

4. Press the '**Report Generator**' button on the top right corner of the interface

<div style="border:1px solid #9c3;padding:1em;">

Report Generator Permission

 The "**Report Generator**" may not be available to all users of the system due to permission rights. The domain administrator of the system can allow specific users to access and create report generator templates for other users to read and generate reports based on the default templates. If the Report Generator button is not available in the user interface, this means that the tool has not been activated for that user.

</div>

Figure: Generate dashboard widget report

5. Select "**Current Page**" radio button to use the data from the current materials list in the page

6. Select the "**OK**" button to load Report Generator panel

7. Select the "**Advanced tab**" to activate Advanced mode

8. Select the "**Mode drop down arrow**" icon ⬇ to assign "Materials or *Manifest mode*"

9. Select the "**Language drop down arrow**" icon ⬇ to assign language

10. Select the "**Country drop down arrow**" icon ⬇ to assign country

11. Select the "**(M)sds Format drop down arrow**" icon ⬇ to assign (M)sds Format

12. Hover mouse pointer over the "**Add**" icon ➕ **and click on "Add Datapoint button** to create a report template [Add Report DATAPOINTS]

Figure: Advanced tab to create report generator template
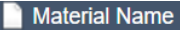
13. Select the "**Expand arrow**" icon ▶ **for the "Identification"** datapoint parent directory ▶ ☐ 📁 Identification to list specific datapoints

14. Select the "**Checkbox**" for the "**Material Name**" datapoint ☐ 📄 Material Name

15. Select the "**Checkbox**" for the "**Vendor** datapoint ☐ 📄 Vendor

16. Select the "**Expand arrow**" icon ▶ **for the "Identification"** datapoint parent directory ◢ ☐ 📁 Manifest to list specific datapoints

17. Select the "**Checkbox**" for the "**Folders/Stores**" name datapoint ☐ 📄 Folders/ Stores name

18. Select the "**Checkbox**" for the "**Max Volume**" datapoint ☐ 📄 Max volume

19. Select the "**Report Name**" text field to enter the name for the report template

20. Press the "**Create Report**" button to save report template

21. Select the "**Report drop down arrow**" icon ▾ to assign the report name

22. Select the "**Format drop down arrow**" icon ▾ to assign the file format

23. Select the "**Separator Sentence Count drop down arrow**" icon ▾ to assign sentence count

24. Select the "**download**" button to export data based on the default report template

25. *Confirm download folder location name* from the desktop or laptop save as mode

26. Change the *file name of the report*, e.g. Manifest Volumes and Locations (which the name of the default report template assigned in step 7 above)

27. Check the *file type to save as in excel file format*

28. Click "**Save**" button.

Figure: Save export file based on default basic report template
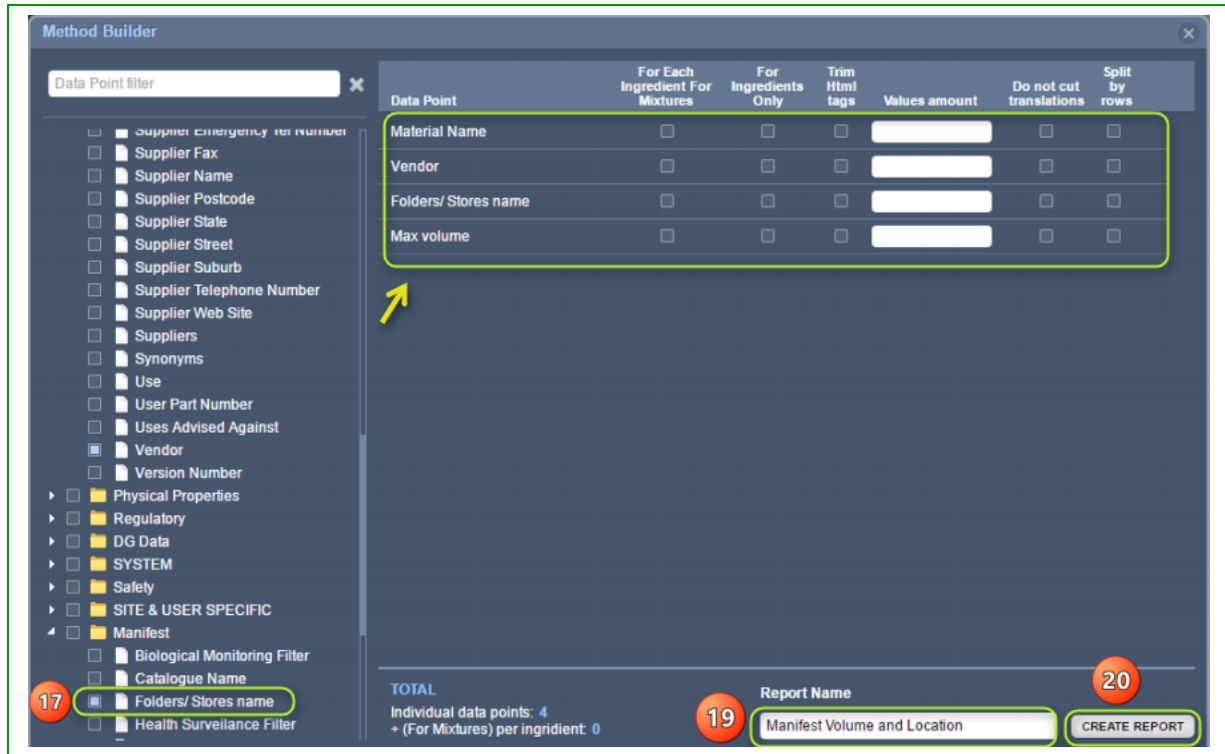
Figure: Download Advanced report
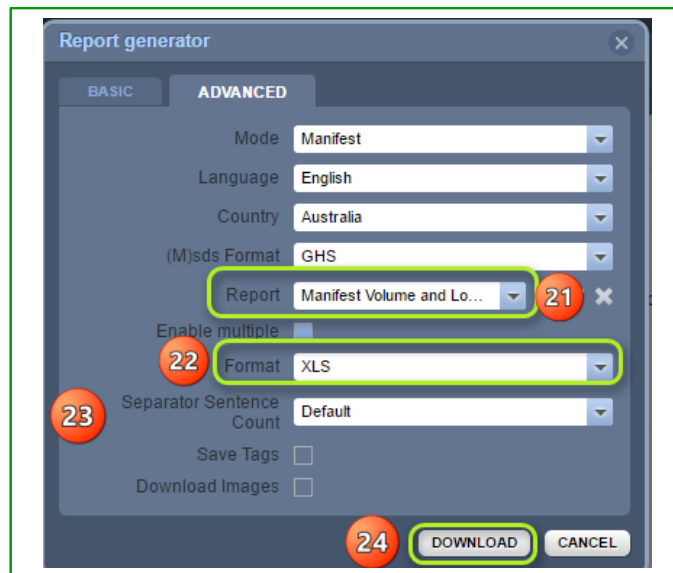
29. Open downloaded file from the desktop download task bar
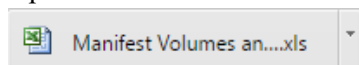
30. Microsoft message may display depending on the desktop excel program settings, **select yes** to complete the task
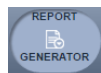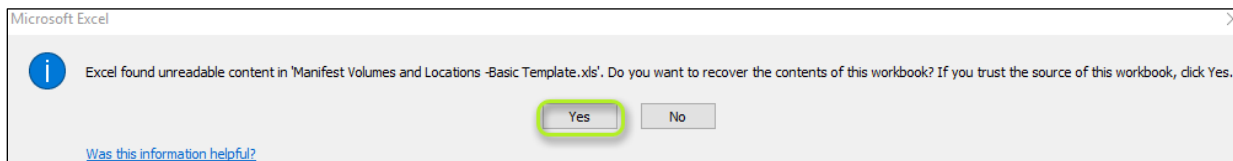

7.1.6 Filter Materials by Manifest Table Column Header

Column Filter

The **"Manifest Materials columns headers"** contain filter icons to allow users to filter for specific materials within the current list. The filter criteria use "**Equals" or "Contains**" to search within the materials list.

Filter Criteria	Description
Equals	Filters the current list of materials in an area\section\location to find an exact match
Contains	Filters the current list of materials in an area\section\location to find close matches or any material name that contains the search term or word

Steps: Search for materials by filtering a list by "Equals"

1. Select the "**Home**" module button ![icon]
2. Select "**folder/store**" ![icon] name that contains materials

    *Note the "**number of materials**" registered in the folder before applying the filter criteria*
3. Press the "**filter**" icon ![icon] within the *Material Name column header*
4. Select the "**Equal or Contains**" drop down arrow icon ![icon] to choose a filter criteria
5. Type the exact name of the material, e.g., acetone
6. Click on the "Apply" button to filter the materials list
7. Materials list displays found record. If a material is not found, the materials table shall display a blank page.
8. Select the "Remove" button to revert back to the main page

Figure: Search for materials by filtering a list
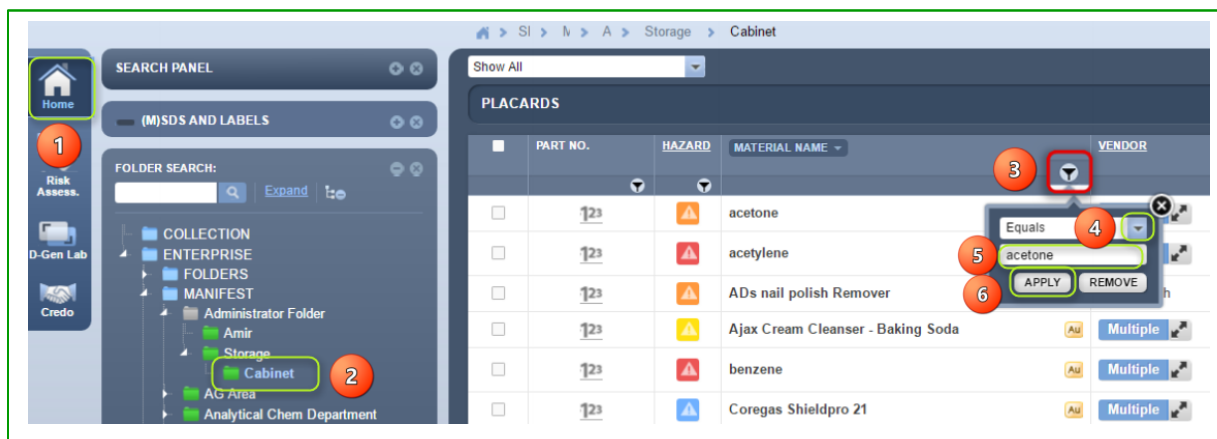
Figure: Filtered materials list
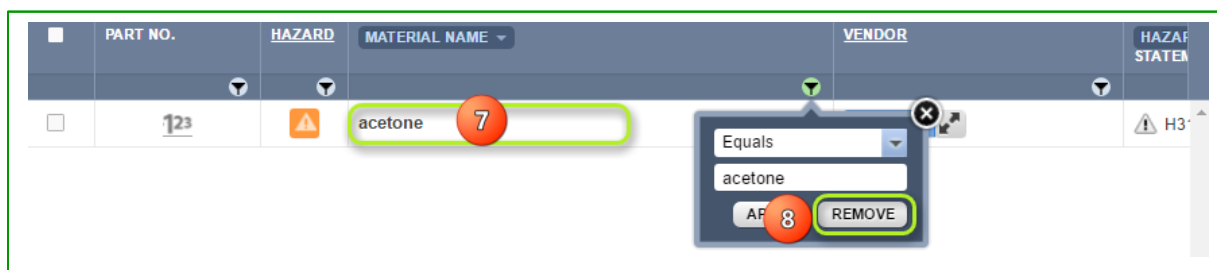
Steps: Search for materials by filtering a list by "Contains"

1. Select the "**Home**" module button ⌂
2. Select "**folder/store**" 📁 name that contains materials

   *Note the "**number of materials**" registered in the folder before applying the filter criteria*
3. Press the "**filter**" icon 🔽 within the *Material Name column header*
4. Select the *"Equal or Contains"* drop down arrow icon 🔽 to choose a filter criteria
5. Type "*part of the material name*" in the text field, e.g., ace
6. Click on the "**Apply**" button to filter the materials list
7. Materials list displays found record. If a material is not found, the materials table shall display a blank page.
8. Select the "**Remove**" button to revert back to the main page

Figure: Search for materials by filtering a list
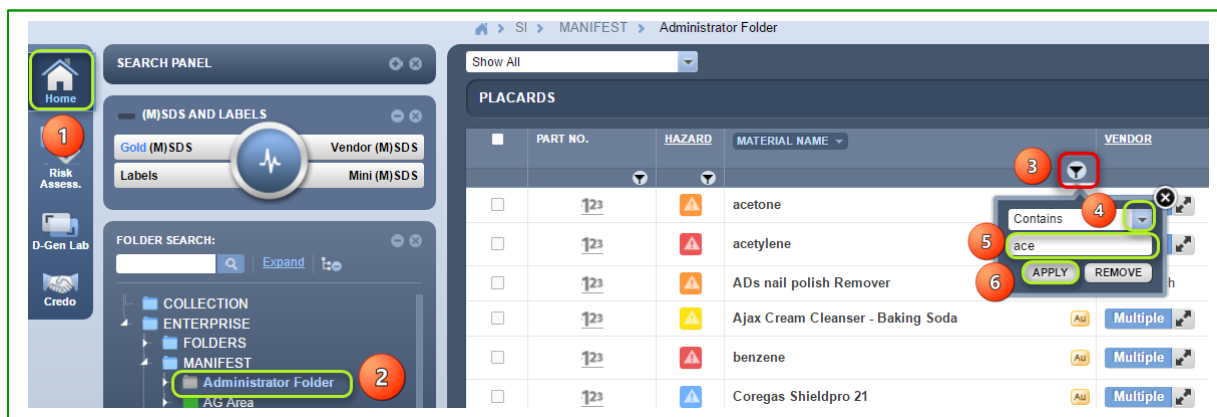
Figures: Filtered materials list

Note that preferred names cannot be filtered when using the filter options; Equal or Contains.

8 Risk Assessments

8.1 Overview of the Risk Assessment Module

The GHS instrument defines the exposure conditions to assist the chemical user to identify the appropriate approach to control the risks associated with the hazardous substances used in a work related activity. A toolkit called ICCT/CCTK was modelled utilising these instruments and designed to identify control solutions that provide health protection for the large majority of workers whereas pregnant women and the adult may require additional protection when exposed to specific hazardous substances. The primary objective of this tool is to provide basic advise on the workplace control of risks to health from airborne contaminants, fire and explosion and the environment including guidance on the use of pesticides. The toolkit has been developed in this premise and provides advice on how these chemicals can be safely handled providing the material supplied has been classified and has the classification on the product label or SDS. The general approach to conducting risk assessments using the COBRA/COSHHPLIANT model is to a *six stepwise process*.

Figure: RA Module Home Page

The table below provides a summary description of each element in the numbers elements of the risk assessment home page.

Descriptions Table for the RA Module Home Page
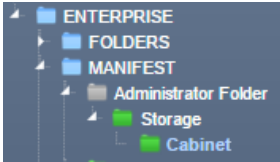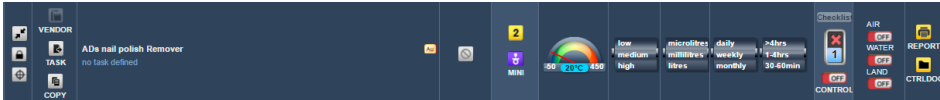
Item	User Interface Page Tools	Description
Search	Search Panel	Search for materials by Name, Vendor using Full or Own reference path.
1.	Folders and Manifest structure	Displays existing folders and manifest directories and sub (child) folders or stores.
2.	RA Toolbar	Toolbar provides icons to the following elements as per the default risk assessment settings.
	Settings	Provides options to apply default settings or own settings' for the risk assessment parameters.
	Expand All	Allows user to expand the entire table's rows to view all attributes as extended icons.
	Unlock All	Unlocks all materials row lock icons. Note that the lock icon allows users to edit parameters and save the risk assessment by locking. The lock icon is accessible by expanding all or a single row.
	Group	Group all materials in a folder in accordance to the materials folder locations. This enables users to view a collated list of materials per folder locations of materials. This feature is best utilised when looking at a parent folder that contains multiple subsidiary folders per sites, areas and locations.
	No Filter	Filter materials by health surveillance, biological monitoring, pending data extraction and tags.
	Jobs	Access to all saved risk assessments per job name assigned through the approvals forms panel in the risk assessment module.
	Dashboard	Access statistical data through widgets' reports for the age of risk assessments, risk assessment by date, risk assessment ratings, status and risk matrix.
3.	Taskbar	Print, save, email risk assessment related reports, materials lists, risk assessment report, Mini (M)SDS, job reports
4.	Eye glass column	In expanded view each row contains the expand icon, track icon, and the key-lock icon.
	Vendors	In expanded view, each row contains a Vendor button, task icon and a copy icon.
5.	Chemical Name	Contains material names and may also include VGD icons and or Au icons.
6.	Status	Provides the status of a risk assessment; Assessment Required, Assessment Complete Review Required, Assessment Incomplete, Assessment Not Required

7.	Hazard Rating	If a Chemwatch classification is available for the material, a hazard rating is automatically calculated based on the control banding model. The hazard rating levels used in the control banding model are; *0, 1, 2, 3, 4, 4+* and *?*; where, if a material is not classified by Chemwatch model's control banding model due to the unavailability of Gold (M)SDS Data.
8.	Volatility and Scale of Use	Parameters for volatility are set by default depending on the physical property of the material. Scale of use parameters ae provided to assign respective level, operating temperature and frequency of use. Note that the scale of use may affect the risk assessment conclusion rating (Risk Band).
9.	Risk Band	If a Chemwatch classification is available for the material, a risk rating is automatically calculated based on the control banding model's default settings. The risk rating levels used in the control banding model are; *0, 1, 2, 3, 4, 4+* and *?*; where, if a material is not classified by Chemwatch model's control banding model due to the unavailability of Gold (M)SDS Data.
10.	Discharge	Provides risk assessment discharge options to consider for the environment.
11.	Docs	Access all risk assessments through the Docs column icon called "Report" and Control Approach documents/sheets based on assigned risk assessment task.
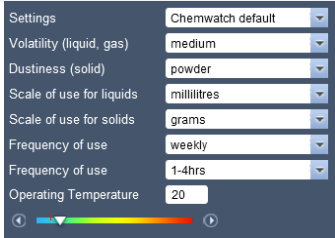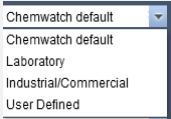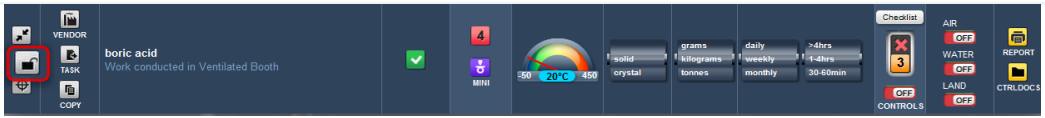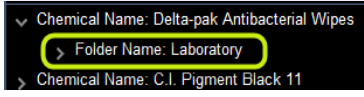
Completing Risk Assessment's Primary Steps
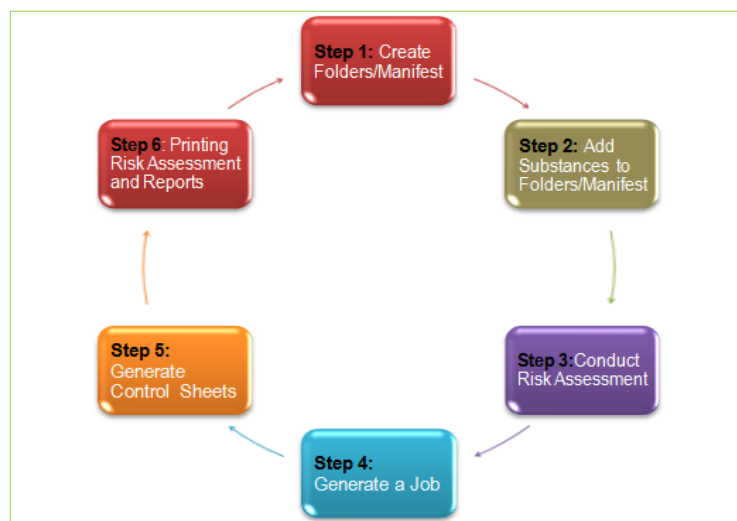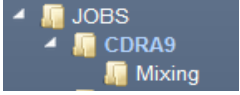
Primary six-step process

Steps	Actions	Description
1.	Create folders or manifest stores	Create folders and or stores under the Folders directory of Manifest directory. Note that the folder structure may already been created in the Home module when creating a manifest or a register of the products as per domain's inventory.
2.	Add materials into folders or stores	Create an inventory for respective folder to enable risk assessments for the materials.
3.	Conduct the risk assessment	The risk assessment action point include expanding the row, opening the lock, assign a task, set operating temperature, set scale and frequency of use, apply controls and review PPE, set discharge option, open risk assessment report and fill in the approvals form and finally save the risk assessment.
4.	Generate a Job	Open risk assessment report and fill in the approvals form through the approvals docs icon and upload a signature to and save risk assessment report.
5.	Generate Control Sheets	Print or Save control approach document from the Control Docs icon . For more information on the ILO toolkit reference guidance documents codes, click here.
6.	Print risk assessments reports	Print risk assessment reports using from materials list or when viewing the full one page document. The risk assessment report is accessible from the DOCS column's report icon

The Risk Assessment Toolbar

Toolbar	Image when selected	Description
Settings	Settings — Chemwatch default; Volatility (liquid, gas) — medium; Dustiness (solid) — powder; Scale of use for liquids — millilitres; Scale of use for solids — grams; Frequency of use — weekly; Frequency of use — 1-4hrs; Operating Temperature — 20	These settings are set by default (Chemwatch). Other options are available from the drop down list. Select the conditions for your environment.

Setting	Description
Laboratory	set of values for laboratory environment
Industrial or Commercial	set of values for manufacturing environment
User Defined	define your own set of values

Chemwatch default
Chemwatch default
Laboratory
Industrial/Commercial
User Defined

Setting	Volatility	Dustiness	Scale, liquids	Scale, solids	Frequency 1	Frequency 2
Chemwatch default	Medium	Powder	Litres	Kilograms	Weekly	1-4 hrs
Laboratory	Medium	Powder	Milliliters	Grams	Daily	> 4 hrs
Manufacturing	Medium	Powder	Cubic meters	Tonnes	Daily	1-4 hrs

Toolbar	Image when selected	Description
Expand All	boric acid — Work conducted in Ventilated Booth	
Unlock All	boric acid — Work conducted in Ventilated Booth	
Group	Chemical Name: Delta-pak Antibacterial Wipes / Folder Name: Laboratory / Chemical Name: C.I. Pigment Black 11	Materials can be grouped to identify the respective folders/stores where they may be located for ease of reference to the status of the risk assessments for the same material, which may be in multiple locations.

Filter	No Filter Health Surveilance Biological Monitoring	Health surveillance is the requirement for health monitoring when working with a chemical/product. These types of HS materials include asbestos, benzene, arsenic, mercury, etc. Biological Monitoring identifies the material/chemical located in folder/store which has potential effects on a worker's health status. You can sort by either to generate a list.
Jobs	▲ JOBS ▲ CDRA9 Mixing	The Jobs module provides a list of Jobs' folder and subsequent tasks nodes within the tree for all risk assessments conducted and saved by creating a job for each material.
	Risk Assessment toolbar button	This button takes back to the RA module default page.

8.2 Risk Assessment Modes

Out of the Chemwatch suite of Applications, *COBRA*, the Control Branding Risk Assessment is a task-based 30-second risk assessing solution for handling and storage of chemicals, a utility that generates a one-page Hazard Summary and Risk Report. Increasingly being applied worldwide, this approach has been internationalised by the International Labour Organisation (ILO). The Risk Assessment module curtails two modalities; Health (ILO) and Dangerous Goods (UN) Risk Assessment. An overview on the features of the risk assessments modalities are discussed in the following sub-sections.

Dangerous Goods Not Covered in Risk Assessment Module

 Note that in the UN tab of the Risk Assessment module, there's a logic that does not cover specific dangerous goods classes *"DGC7 and DGC9"*. Non-physical DG is not covered except for dangerous goods that fall in the category of physical hazards such as flammability or explosion. Example of such a material is "diesel", a message displays when hovering over the hazard rating question mark [?].

Petro Diamond Diesel
no task defined   This Chemical is not covered by this Risk Assessment mode   ?
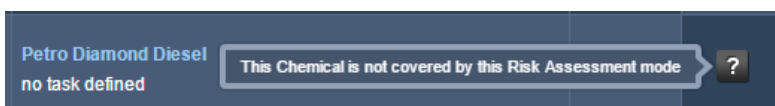
8.2.1 ILO (Health) Risk Assessment Mode

Hazard Rating Calculation

The baseline for the calculation stems from the fact that a hazardous chemical which can cause serious effects will require a greater degree of control compared to a less harmful one. Substances are placed into six different hazard groups *(A – E and S)*. These groups are graded from *[1- 4+]* and colour codes applied to designate each risk calculation band in accordance to hazard classification rating for the chemical. In the Chemwatch database, each Chemwatch Number (CW No) will have R codes against chemical if is classified as a hazardous material. In the cases where Chemwatch has not classified the chemical, the *"?"* will be displayed against that chemical. The ILO scheme allows either classification systems; *GHS or EU R-phrase classification*.

Table: Hazard group classification and allocation

Rating	Hazard Group	EU R-Phrases	GHS Hazard Classification (class/level)
0	None	None	None
1	A	R36, R38, R65, R66 All dusts and vapours not allocated to another band	*Acute toxicity (lethality), any route, class 5* *Skin irritancy class 2 or 3* *Eye irritancy class 2* *All dusts and vapours not allocated to another band*
2	B	R20/21/22, R40/20/21/22, R33, R67	*Acute toxicity (lethality), any route, class 4* *Acute toxicity (systemic), any route, class 2*
3	C	R23/24/25, R34, R35, R37, R39/23/24/25, R41, R43, R48/20/21/22	*Acute toxicity (lethality), any route, class 3* *Acute toxicity (systemic), any route, class 1* *Corrosivity, subclass 1A, 1B or 1C* *Eye irritancy class 1* *Respiratory system irritancy (GHS criteria to be agreed)* *Skin sensitisation* *Repeated exposure toxicity*
4	D	R48/23/24/25, R26/27/28, R39/26/27/28, R40 Carcinogen. Cat. 3, R60, R61, R62, R63, R64	*Acute toxicity (lethality), any route, class 1 or 2* *Carcinogenicity class 2* *Repeated exposure toxicity, any route, class 1* *Reproductive toxicity class 1 or 2*
4+	E	R42, R45, R46, R49, R68	*Mutagenicity class 1 or 2* *Carcinogenicity class 1* *Respiratory sensitisation*
	S *skin and eye contact*	R21, R24, R27, R34, R35, R36, R38, R39/24, R39/27, R40/21, R41, R43, R48/21, R48/24, R66	*Acute toxicity (lethality), dermal only, class 1, 2, 3 or 4* *Acute toxicity (systemic), dermal only, class 1 or 2* *Corrosivity, subclass 1A, 1B or 1C* *Skin irritation class 2* *Eye irritation class 1 or 2* *Skin sensitisation* *Repeated exposure toxicity, dermal only, class 1 or 2*

Table: Risk Assessment Hazard Rating levels

Rating	Hazard Calculation	Colour Code	Hazard Rating Icon
4+	Extreme	Dar Red	
4	Very High	Red	
3	High	Orange	
2	Moderate	Yellow	
1	Low	Blue	
0	*None*	*Grey*	
?	*Question Mark*	*Dark Grey*	
Notes	*Any material assigned a question mark signifies that it does not have a corresponding Gold MSDS, hence, calculation not available. Recommend that, for such a material, conduct a classification activity in the Manifest Module first, and then conduct the risk assessment for this type of material. Always check the MSDS for more information on the classification of the material.*		
	The rating {0} applies to a material that is considered to be non-hazardous [Not classified as a hazardous substance or hazardous chemical]. Note that such a material may be classified as a dangerous good. Confirm by checking the MSDS.		

Description of Operating Parameters

Operating Temperature	Temperature Gauge or Selector	» affects volatility for liquids and may also affect solids.
	Temperature Text Field	» apply gauge within the minimum and maximum temperature range. » determines the volatility of the chemical at a particular temperature, for example, if lead melts at 327.5°C, thence, will be treated as a liquid.
Volatility or Dustiness	Ability of a chemical to become airborne ¤ Low ¤ Medium ¤ High	▶ **Low level** calm state of the chemical, unlikely to be breathed in or eye/skin contact; ▶ **Medium level** chemical evaporating at a medium rate, if classified as hazardous, likelihood of inhalation, moderate level of exposure; ▶ **High level** chemical considered to be airborne and will affect respiratory system, eyes, skin, etc.
Scale of Use	Quantity or Amount of Material (chemical in use) ¤ Small ¤ Medium ¤ Large	» the amount of material or quantity of chemical being used determines how the chemical is handled and how much exposure is presented. The table below will assist to determine the material quantity.

Quantity	Solid		Liquid	
	Weight	**Received in**	**Volume**	**Received in**
Small	grams	packets or bottles	millimetres	bottles
Medium	kilograms	kegs or drums	litres	drums
Large	tonnes	bulk	cubic metres	bulk

What does Volatility/Dustiness mean

Keywords:

Operating temperature, health monitoring, chemicals of concerns, carcinogen, extremely hazardous substance/chemical, dangerous good, scale of use, frequency of use, granules, pellets, solids for dustiness, liquids for airborne, level of risk, type of exposure, engineering controls, administrative controls, PPE, equipment and biological monitoring.

Volatility is a property of a chemical that is in a liquid state. In this risk assessment scheme, we use the dustiness for solids and volatility for liquids to subscribe relevancy to the operating temperature. The more volatile or dustier the substance, the higher the probability to become airborne.

- To mitigate these sort of risks, it is recommended to replace fine powder with pellets or less dusty granules.
- To use liquids at a lower temperature.

The Dustiness of SOLIDS is classified as LOW, MEDIUM or HIGH.

Level of Dustiness	Description of type of solid
Low	Pellets like solids that do not break. Little dust seen during a task of use of this type of solid, e.g. pvc pellets
Medium	Crystalline, granular solids. Dust is visible when used or applied in a task, but settles quicker. Usually dust is seen on surface after use, e.g. soap powder
High	Fine, light powders. Forms visible dust clouds and remain in the air for several minutes, e.g. cement, carbon black, chalk

Volatility Graph for a Liquid

The Volatility of LIQUIDS is classified as; HIGH, MEDIUM or LOW

The volatility of a liquid is determined by its Boiling Point (BP). This type of data is available in the actual Material Safety Data Sheet (MSDS), usually inscribed in section 9 of the MSDS.

Level of Volatility	Boiling Point of Liquid, °C
High	Boiling point below 50°C *[BP < 50°C]*
Medium	Boiling point between 50°Cand 150°C *[BP range {50°C - 150°C}]*
Low	Boiling point above 150°C *[BP > 150°C]*

For tasks carried out above room temperature, in addition to the boiling point you will need to know the process temperature. These two pieces of information are used to decide volatility from the graph. Note that by default volatility/dustiness is calculated in the system for each material based on this analogy.

Status of the Risk Assessment

The status of the risk assessment of a material is provided through the status tag for each material registered into a folder or a manifest store. The risk assessment date is defaulted to 5 years maximum in order to ensure compliance requirements are met for a period of time of the last assessment was completed.

Risk Assessment Status Descriptions

Status of Risk Assessment	Icon	Description
Assessment Required		When a material is registered in a folder or stored, the status renders assessment requirement. Copying a material that is already assessed into the same folder or another will also render this status.
Assessment Complete		When a material with known hazards (classification by CW available) has been risk assessed, will render the completion status.
Review Required		When the period of time set for the audit {maximum ≤ 5years} elapses, the status of the assessment will automatically change from complete to "review required".
Assessment Incomplete		When an assessment has not been completed for any reason or the transaction was not finalised in saving the audit appropriately, the application render status incomplete, hence, imperatively important to finalise your risk assessment to complete where necessary.
Note	*Assessment date and review dates will appear in the final risk assessment report*	

RA Reports and Control Approach Guidance Documents

Once the risk assessment band has been determined by default*[i.e. the level of risk is known, calculated]*, the program will provide material **Risk Assessment Report** 🔲 and all the relevant control approach documents and task sheets applicable to the risk assessment being carried out. The documents are task guidance sheets that identify the control needs and recommendations for consideration. The Control Approach has four main categories [1-4] excluding pesticides. The table below illustrates a summary of the types of control sheet series that can be accessed through the "**CTRLDOCS**" icon 🔲 within the DOCS column [DOCS] of the risk assessment material grid.

Control Approach Guidance Documents' Codes

Control Approach	Task Control Sheet Series	Sheet Description
Pesticides	P100 – P104	*Concentrate dilution, spraying, fumigation, poison baits, disposal, etc.*
Control Approach (CP1 - 4)	**Task Control Sheet Series**	**Sheet Description**
CP 1	100-103	*General Principles, Sack, bottle and rum storage, bulk storage, remove waste from air, etc.*
CP 2	200 - 221	*General principles, ventilation, workbench, waste removal, sack filling/emptying, ventilated booth, sieving, pelletising, etc.*
CP 3	300 - 318	*General principles and tasks[[glove box, mixing, transferring, weighing, filling and emptying, etc.*
CP 4	400	*General principles*
Skin and Respiratory	Sk100 and R100	*How to reduce skin contact, selection and use of PPE*
Safety and Environment	S100 and E100, E200, E300	*Lock out/ tag out system, control of emissions to air, control of emissions to water, safe disposal of solid waste*

List of Guidance Sheets

Click on each "*SheetID"* link from the table below to open the Toolkit Sheet series document for reference.

Sheet ID	Description
Pesticides	
P100	Concentrate dilution
P101	Application (spraying and dusting)
P102	Fumigation
P103	Using poison baits
P104	Disposing of used containers
Control Approach 1	
100	General principles
101	Sack, bottle and drum storage

102	Bulk storage
103	Removing waste from air cleaning unit
Control Approach 2	
200	General principles
201	Ventilated workbench or cupboard
202	Ventilated booth
203	Removing waste from air cleaning unit
204	Conveyor transfer
205	Sack filling
206	Sack emptying
207	Charging reactor or mixer from sack or keg
208	IBC filling and emptying
209	Drum filling
210	Drum emptying with a drum pump
211	Weighing solids
212	Mixing liquids with liquids or solids
213	Mixing solids
214	Sieving
215	Screening
216	Spray painting
217	Pickling / Plating bath
218	Vapour degreasing bath
219	Tray drying oven
220	Pelletising
221	Tablet press
Control Approach 3	
300	General principles
301	Glove box
302	Removing waste from extraction unit
303	Transferring solids

304	High throughput sack emptying
305	Drum filling
306	Drum emptying
307	IBC filling and emptying (solids)
308	IBC filling and emptying (liquids)
309	Tanker filling and emptying (solids)
310	Tanker filling and emptying (liquids)
311	Keg filling
312	Transferring liquid by pump
313	Filling small containers (packets and bottles)
314	Weighing solids using a load cell
315	Weighing liquids using a load cell
316	Mixing solids
317	Mixing liquids with liquids or solids
318	Vapour degreasing bath
Control Approach 4	
400	General principles
Skin and eye contact	
Sk100	How to reduce skin contact with hazardous substances
Respiratory protection equipment	
R100	Selection and use of respiratory protective equipment
Safety issues	
S100	Key features of Lock-out/tag-out system
Environment issues	
E100	Control of emissions to air
E200	Control of emissions to water
E300	Safe disposal of solid waste

Vendor Gold Data in Risk Assessment Module

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Vendor Gold Data (VGD)

VGD is an acronym for **"Vendor Gold Data"**, which is now applied to the new DET (Data Extraction Tool) logic in Risk Assessment.

Chemwatch Extracted Data by VGD

The latest changes on the Risk Assessments Materials Table displays a new icon [VGD] called **"VGD"** within the Chemical Name column, designated to materials that have Vendor Gold Data (VGD) extracted by Chemwatch by default. The VGD icon is displayed for specific materials with a Gold MSDS available or not available based on the logic explained below.

</div>

Figure: VGD icon display in Chemical Name column

VGD Summary Description

Material's Table Icon	Description	Purpose and Use of VGD
VGD [VGD]	Vendor Gold Data (Extracted Automatically by Chemwatch)	VGD data is a representation of availability of classification information for a particular material extracted by Chemwatch with respect to the Vendor SDS material as is; by display of the static icon [VGD] . Chemwatch displays an icon called VGD in the materials column against that material. Note Chemwatch Classification for a Gold SDS may differ from the Vendor as Chemwatch conducts independent research and considers the worst case scenario to provide as much adequate information as possible; for best health and safety practices.

8.2.1.1 Data Extraction Tool

The DET (Data Extraction Tool) specific logical cases used to show the VGD icon are listed below and in the case where there's no VGD data, then the question mark icon ? is displayed for the hazard rating of the material as shown in the image below.

Figure: DET display for a Chemical without Gold Data

DET Summary Description

Materials Table Icon	Description	Purpose and Use of DET
DET (Question Mark) ?	Data Extraction Tool (to be manually extracted data by user)	Material name in the table is designated with a hazard question mark ?, which means that classification data has not been extracted by Chemwatch at this time. However, user can extract classification data by use of the DET Tool. One of the primary benefits of having data extracted for a material that does not have a Gold SDS, user can filter by hazards surveillance or biological monitoring and if the material (with Vendor DET button active ▦, will allow user to be able to conduct a risk assessment for that material that does not have classification data in the system due to the fact that a Gold Data is currently not available for that specific material. If the Vendor (M)SDS button is greyed out, this means that it is not possible to conduct DET due to available of VGD data and the hazard rating will not have a question mark.

Steps: **Data Extraction Tool in Risk Assessment Module**

1. Select the "**RA**" module button ⚄.
2. Select "**folder/store**" 📁 name that contains material to be assessed.
3. Press the "**ILO**" tab ILO above the *Material Table.*
4. Select the *"Expand"* icon ⤢ to expand the row.
5. Select the "*locked key*" icon 🔒 to open risk assessment.

6. Select the "Vendor" (M)SDS button to open the DET Tool for a material with a question mark icon within the hazard column

7. Select the document name from the document list to reference the respective classification data in section 2 (hazards identification) or 3, section 14 (dangerous goods classification).

8. Assign Risk Codes (EU/DSD or NOHSC) by selecting checkboxes for the confirmed hazards from the Vendor MSDS or assign Hazard Codes (GHS).

9. Select **"drop down arrows"** for Dangerous Goods classification; *DGC, Subrisk 1, Subrisk 2, Packing Group.*

10. Assign **"Physical Properties"** for the material, refer to section 9 of the Vendor (M)SDS document; boiling point (°C), atmospheric pressure, melting point (°C).

11. Press the **"Submit"** button to save classification DET data input.

Figure: Open DET Tool for chemical with question icon in hazard column

12. Select the **"Back"** button ◄ BACK to go back to the document list

13. Select the **"Back"** button ◄ BACK again to go back to the risk assessment home page

14. Take notice of the following changes; the *hazard rating* icon will change from a question mark to reflect the grouping classification rating based on assigned hazard codes from the

DET Tool and the risk assessment status changes from "Assessment Required" to **"Assessment Incomplete"**

15. Expand row, Open the lock and click on the **"Task"** icon to assign a task for the risk assessment => follow the steps on how to conduct risk assessment ion on the proceeding sections [**Conduct a health (ILO) risk assessment and generate a job for approval].**

The table below provides the various scenarios used in the DET/VGD logic. The VGD in RA logic is now applied and a new status for VGD data set will be added to all existing Risk Assessments. This status should have specific values based on status for Gold data set based on the risk assessment status that existed before the update of this new logic.

Data Preferences Settings

Note that there are *four types* of settings related to use of classification data. These settings will be set by the domain administrator of the system in conjunction with Chemwatch. If unsure of the type of VGD that is applicable to your domain account, please contact customer service account manager at customerservice@chemwatch.net. For background information, the table below provides a summary description of the various types of VDG attributes to settings and how it works in the system when searching and/or when materials lists are displayed and also display of Gold, Mini MSDS and Labels.

Table 87: Types of VGD Descriptions

Type of Data	Usage	Description
UGD (User Gold Data)	Data extracted by a user to be used in RA Materials Table and applicable Risk/Hazard codes, Dangerous Goods classification where applicable by vendor classification of the material in order to be	User Gold Data extracted using the DET Tool by referencing a Vendor specific document data in section 2, 3, 11 and 14 in order to assign respective Risk/Hazard Codes, DG Class, PKG to that material.

	able to; * Filter by health surveillance or biological monitoring * Conduct Risk Assessments for a material that does not have Gold MSDS (no classification data available in the system)	
Force Gold	Gold MSDS data will only be used	VGD and UGD data will never be used when Force Gold data is used. Gold Data is based on Chemwatch classification as per regulatory instruments as per respective jurisdictions (by Region/Country/MSDS Format).
Force VGD	Vendor Gold Data or User Gold Data will only be used	VGD and UGD data will be used when Force VGD data is applied by Chemwatch for that domain. Vendor or User Gold Data is based on data extracted for classification as per regulatory instruments. Gold Data will never be used, except when a Gold MSDS is displayed or Mini or Labels or Emergency Reports.
Prefer Gold Prefer VGD	Prefer Gold - Use of both Gold and VGD/UGD data Prefer VGD - Use of both Gold and VGD/UGD data	Gold data will only be used when a single material has both types of data available. VGD/UGD data will only be used when a single material has both types of data available

Summary of VGD Preferences

VGD Mode	DET button is available and DET data overrides materials data (if any)
Force Gold	DET is never available. User relies on Gold Data.
Force VGD	When there is no VGD data a ? mark is shown
Prefer Gold	When there is no Gold and VGD data, a ? mark is shown
Prefer VGD	When there is no VGD data. Gold data can be available and used for RA record, but DET data will override this Gold data

Steps: Conduct a health (ILO) risk assessment and generate a job for approval

1. Select the "**RA**" module button .

2. Select "**folder/store**" name that contains material to be assessed.

3. Press the "**ILO**" tab ILO above the *Material Table.*

4. Select the **"Expand"** icon ![icon] to expand the row.

5. Select the "**locked key**" icon ![icon] to open risk assessment.

6. Click on the **"Task"** icon ![icon] to assign a task for the risk assessment.

Figure: Conduct a risk assessment

16. A Task Pane lists 15 parent tasks to choose an applicable task. Click on relevant task name switch icon ![icon] related to the use of the material. Click on the task name from the expanded parent task.

Figure: Conduct a risk assessment – assign a task

Note that the task switch will change from red *to green* *when a task is applied and the task name is displayed below the chemical name.*

 If a related task does not show in the task list, you can create your own task by using the "user defined" option in task list number 16 and switch it on.

Figure: Assign a task for the material

17. Select the **"Close"** icon on the task panel

18. Drag on the **"Operating Temperature gauge"** to desired temperature level or click on the text field to type applicable temperature value to *25°C*

 Notice that if the standard temperature of 20°C is increased, it automatically affects the volatility of the chemical (in this case, a liquid)l. In this exercise, 25°C increases the volatility from medium to high. Take note of the default risk assessment parameters with risk band rating at 1 (low *) before applying changes.*

Figure: Set risk assessment operating parameters and control

19. Set the **"Scale of Use"** to unit measure (millilitres, *litres*, or tonnes) by mouse rolling the barrel

20. Set the **"Frequency of Use"** (*daily*, weekly or monthly) by mouse rolling the barrel

21. Set the **"Frequency of Use"** (<30mins, 30-60mins, *1-4hrs*, or >4hrs) by mouse rolling the barrel

> *Notice that when the scale of use is set to litre and daily frequency of uses, the risk band changes automatically to rating 2 (moderate, *[2]*). Applying the frequency of use to exposure period (1-4hrs) also affects the risk band rating and increases it to rating 3 (high, *[3]*) prior to applying controls.*

22. Select the **"Controls"** button [OFF CONTROLS] (set to **'OFF'** by default)

23. Select "Rating Level of Applied Control", in this case scenario, the risk band is set to risk rating 3 *(high, [3])* *before applying controls.* In order to reduce risks to a minimum, confirm that controls have been adopted in accordance to the rated applied control, e.g., Local Exhaust/Fume Hood" is applied in this case and the risk band rating is automatically reduce to level *(low [1])* and a tick icon [✓] is set to confirm controls.

24. Select the **"Review PPE"** switch button [ON Review PPE] (may be switched to 'ON' if there are set PPEs from the (M)SDS or Chemwatch recommendation by default)
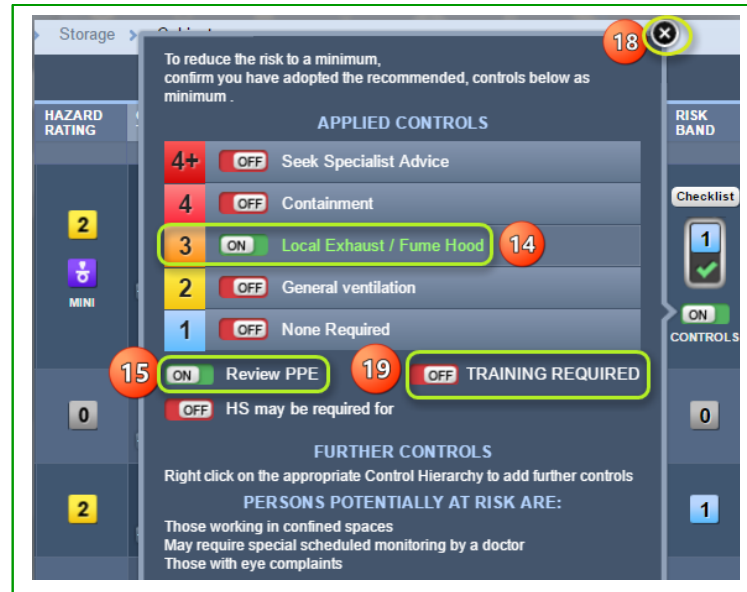
25. Select the applicable **"PPE"** by switching ON the button (if default is OFF) or switch OFF a default PPE button and turn ON another type of required PPE apart from the recommended PPE.

26. Press the **"Submit"** button to save PPE changes
27. Click on **"Close"** icon if "Training or Health Surveillance" is not required
28. Press the "OK" button on the data saved confirmation window

Note

Data Saved

OK

29. Select **"Training Required"** if applicable

30. Select **"Health Surveillance"** for Further Controls if applicable

31. Click the **"Close"** icon

32. Select the **"Checklist"** button located above the risk band rating icon to apply the best basic use of controls.

   ℹ️ *Note that any selected control from the checklist panel will automatically be generated in the final risk assessment report as "Best Use of Controls".*

33. Click on applicable **"Switch" button ON** to enable the best use of control.

34. Select the "Close" button to close the checklist panel.

35. Select **"Discharge" switch to ON** for environmental consideration.

   ℹ️ *Note that any selected discharge from the checklist panel will automatically be generated in the final risk assessment report as "Best Use of Controls".*

36. Click the **"Key lock"** icon [icon] to save the risk assessment.
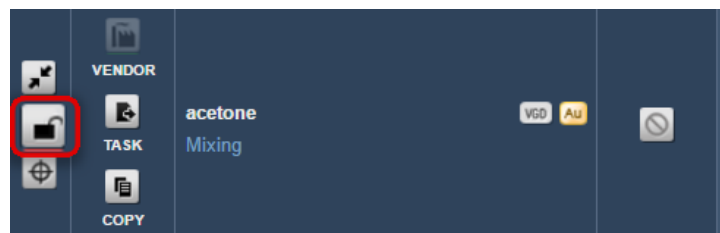
37. Select "Yes" button from the saving dialog message to complete the action.

38. Select **"Yes"** or "No" to copy or not to copy risk assessment data to the UN Mode (Dangerous Goods Risk Assessment Mode). In this case, "Yes" is selected to complete the risk assessment.
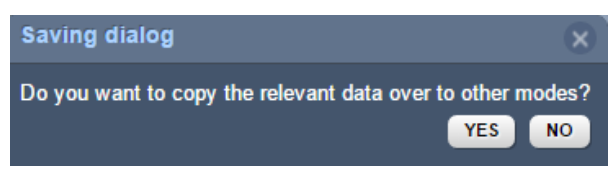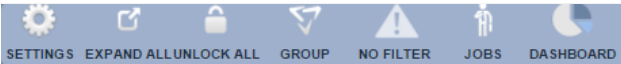
39. Message confirms the *"Risk Assessment data has been saved successfully"* [icon].

8.2.1.2   Assign a Job to a Risk Assessment

The Jobs mode provides access to a list of parent folders based on Job Names assigned to a risk assessment upon filling up the Approvals Form, which is accessible from the Risk Assessment Report ![REPORT] window. The Approvals Form ![Approvals] and Jobs mode are interlinked in both the ILO and UN Risk Assessment modes.

Jobs Mode Attributes

Feature	Name	Description and Use
![REPORT icon]	**Risk Assessment Report**	Access to the Risk Assessment Report window and the Approvals Form through the materials table.
Risk Assessment Toolbar from Main Page		![Toolbar: SETTINGS, EXPAND ALL, UNLOCK ALL, GROUP, NO FILTER, JOBS, DASHBOARD]
![JOBS icon]	**Risk Assessment Jobs**	Access to the Risk Assessment Jobs mode from the RA Toolbar.
![JOBS button]	**Risk Assessment Jobs**	Access to the Risk Assessment Jobs mode from the Folder Panel.
![FOLDERS button]	**Folders button in Jobs mode**	Access to the Risk Assessment home page from the folder panel.
Risk Assessment Toolbar from Jobs Mode Page		![Toolbar: EXPAND ALL, UNLOCK ALL, GROUP, NO FILTER, JOB REPORT, RISK ASSESSMENTS]
![Risk Assessments Home Page icon]	**Risk Assessments Home Page**	Access to the Risk Assessment main home page.
![Job Report icon]	**Risk Assessment Job Report**	Access to the Risk Assessment Jobs Report from the Jobs mode toolbar also called the *"Process Report"*.

The steps below illustrate how to assign a job to a risk assessment as part an approvals process. Note that jobs can be optional depending on the company's procedural requirements for the approvals of risk assessments. Note that it also possible to assign a soft signature as an image or text by using the jobs approvals form.

Signatures can be created using various online software; or through mobile or androids or tablets as *a jpeg or png file* that can be uploaded into the system using the risk assessment approvals form.

The worked example is based on a basic health risk assessment that has already been completed.

Steps: Generate a Risk Assessment Job for Approval

1. Select the "**RA**" module button .

2. Select "**folder/store**" name that contains material to be assessed.

3. Press the "**ILO**" tab above the *Material Table.*

4. Select the *"Expand"* icon to expand the row.

5. Select the "*locked key*" icon to open risk assessment.

6. Click on the "**Report**" icon to display the report for the risk assessed material.

Figure: Display the risk assessment report
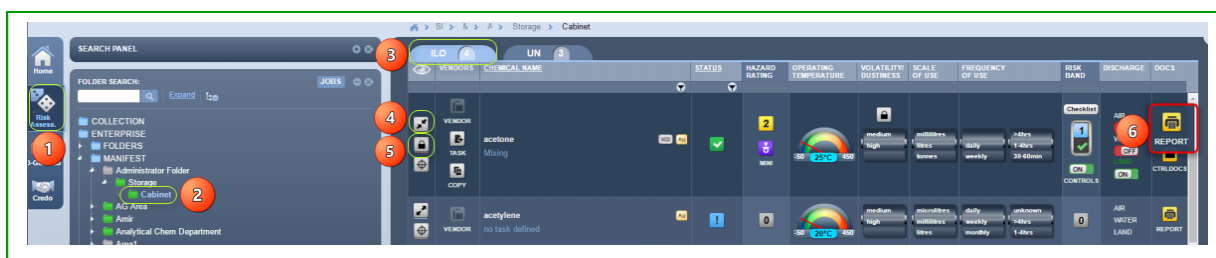
7. Select "Approvals" button link

8. Fill in the following approval form fields to be assigned in the risk assessment report.

Approval Form fields and descriptions

Field	Name	Description and Use
Code	Type a code (can be alpha-numeric)	Attributed to an existing job based on risk assessment task (optional) and may be related to a project or work activity
Job name	Type text (can be alpha-numeric) for the job	Any relevant job name for the task, may be attributed to safe operating procedure or standard operating procedure or project or work activity
Assessed By	Name of the assessor	The (full) name of the person conducting the risk assessment
Signature	Assessor's signature	Applicable to users who have been granted privilege and permission to upload a soft signature file to a risk assessment report
Approved By	Approver's signature	Applicable to users permitted to approve a risk assessment and are granted the rights to upload a soft signature file to a risk assessment report
Persons Exposed	Names of persons involved with the work activity	The (full) names of the persons involved some form or fashion with the risk assessment or somewhat exposed to allowable levels
Operating Procedure	Operating procedure	Type the text or insert a link on the respective operating procedure. *An operating procedure is what guides users on work activity requirements to comply with expected outputs of the tasks carried out to ensure health*

		safety of the risk assessor and people at the workplace including the environmental impact
Added	Added on (dd/mm/yy)	Set a risk assessment date (dd/mm/yy) using the calendar icon
Review	Review date (dd/mm/yy)	Set a risk assessment review date (dd/mm/yy) using the calendar icon . Generally, an (M)SDS is due for review every 5 years upon manufacture of the chemical.

Figure: Filling Risk Assessment Approval Form
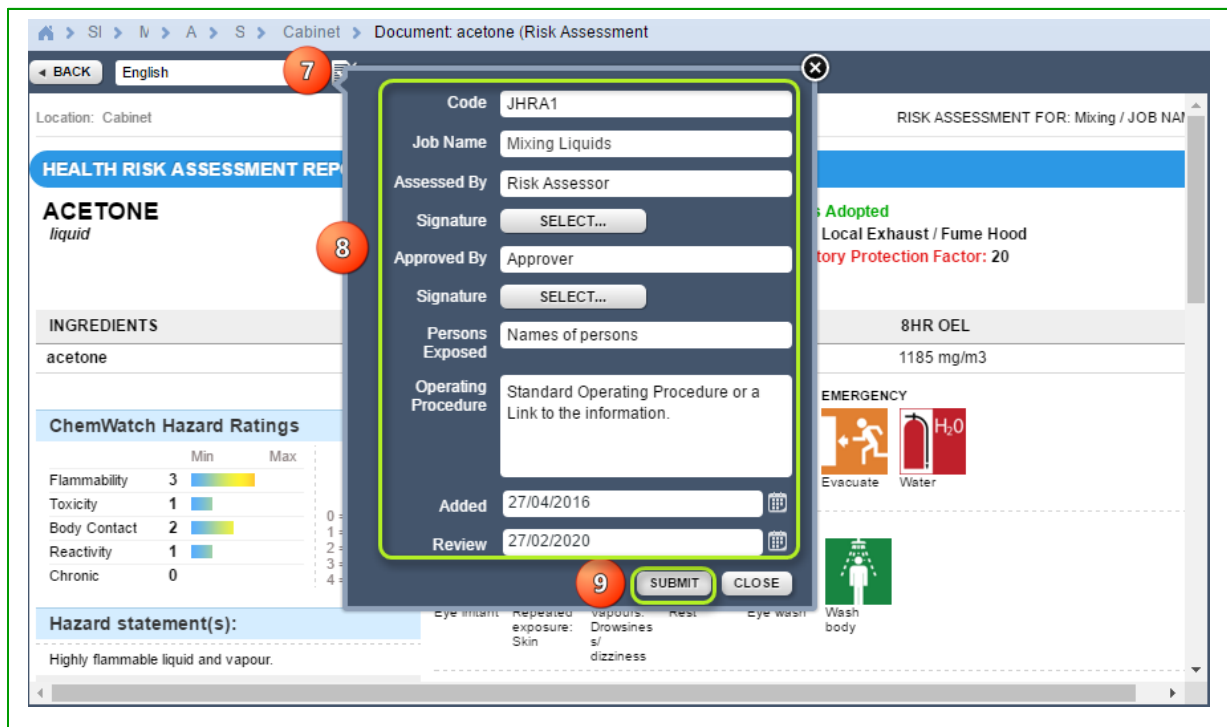
9. Press the **"Submit"** button to save the form
10. *Scroll down the report to view form data* filled in the respective report fields

Figure: Form fields without signatures

Figure: Form fields without signatures

Figure: The risk assessment report in a single page with approved form fields

All jobs are archived in the jobs subsidiary module. To access jobs when displaying a full risk assessment report to print all relevant jobs, follow the steps below.

Steps: Print saved Jobs for the Risk Assessments

1. Select the "**RA**" module button.
2. Select "**folder/store**" name that contains material to be assessed.
3. Press the "**ILO**" tab above the *Material Table.*
4. Select the "**Jobs**" button from the home page toolbar.

Figure: Open Risk Assessment's Jobs mode
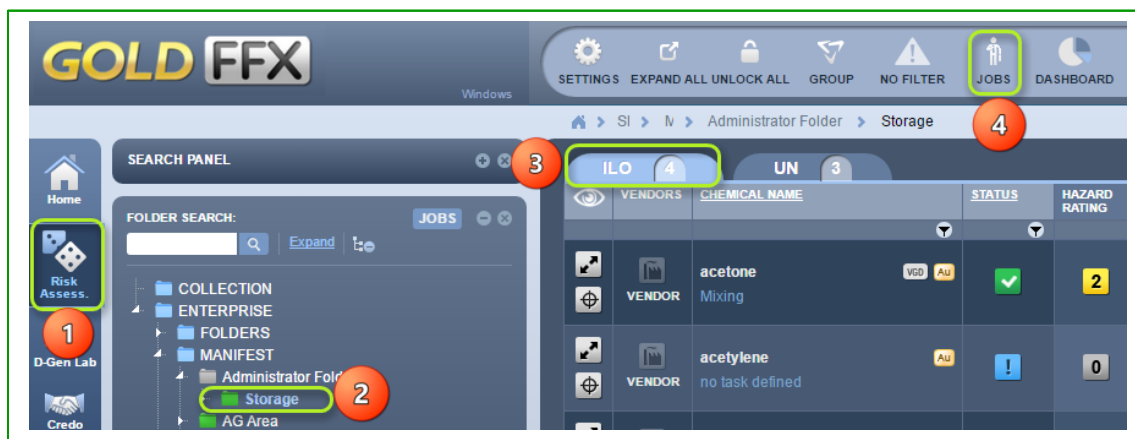
5. Select the "**Jobs expand row**" down to the third level within the jobs folder tree structure
6. Click on the "**Task name folder**" to display the materials table
7. Select the "**Print, Save or Send To**" button from the taskbar
8. Select "checkboxes" alongside the chemical names to batch print reports

Figure: Print Jobs Risk Assessment Report
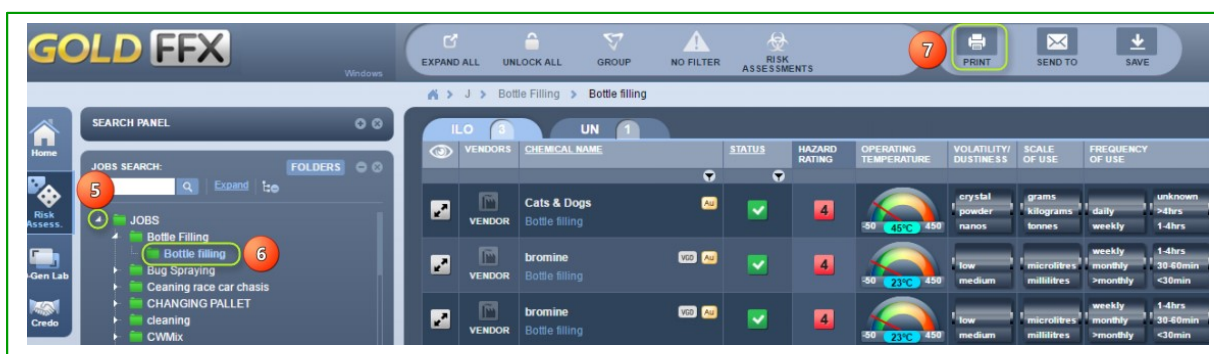
9. Select **"Report"** circle button from the print menu
10. Press the "Submit" button
11. **Upload an assessor's "signature" for all risk assessment report being batched or "skip"**
12. Download or print the jobs risk assessments reports from the acrobat pdf tools.

Figure: Print Jobs Risk Assessment Reports as a batch
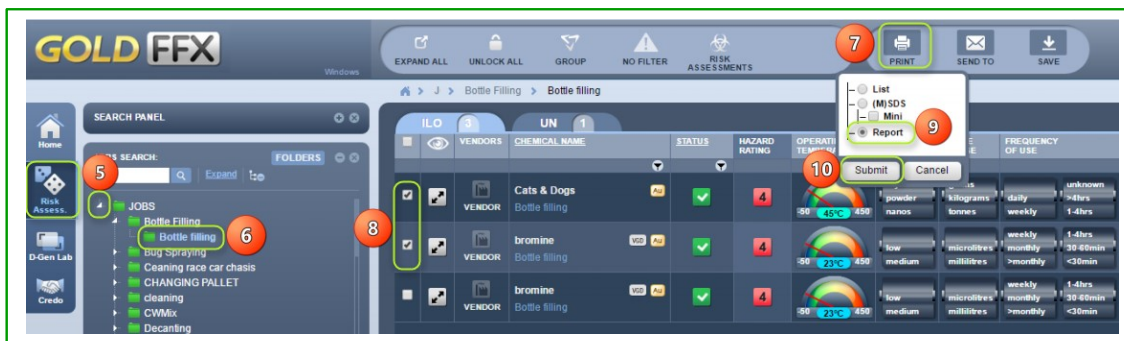
Figure: Print Jobs Risk Assessment Reports as a batch – apply or skip

Figure: Print Jobs Risk Assessment Reports as a batch – from PDF tools

Download or print risk assessment report (with jobs approval form filled)
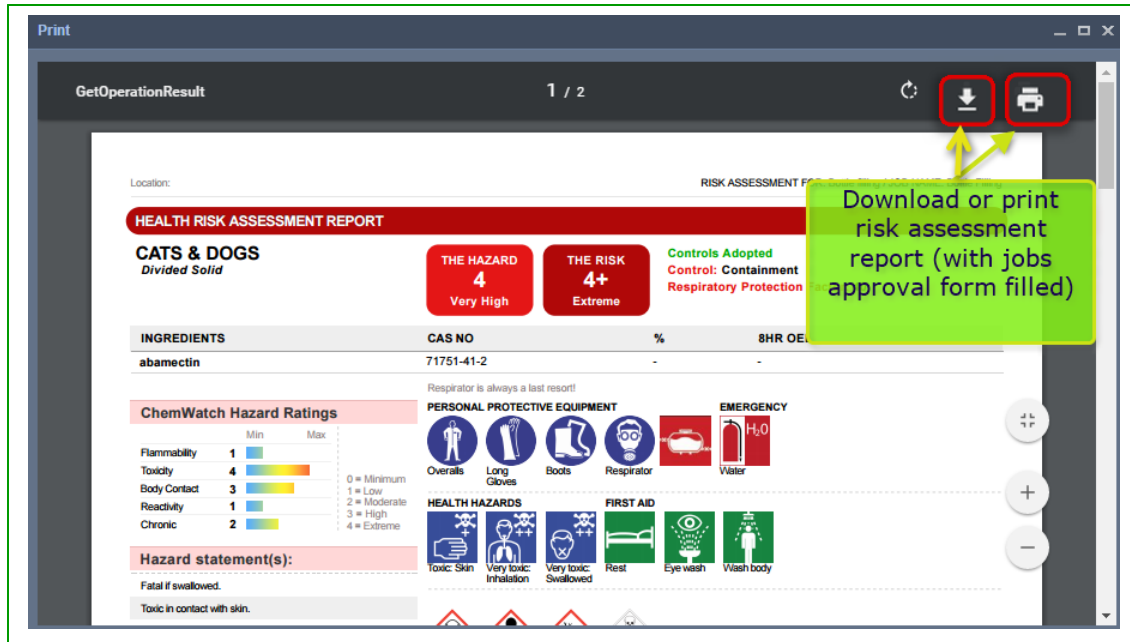
Steps: Print Job Risk Assessment (Process) Report

1. Select the "**RA**" module button .

2. Select "**folder/store**" name that contains material to be assessed.

3. Press the "**ILO**" tab above the *Materials Table.*

4. Click the "**Jobs**" button from the RA home page toolbar

Figure: Access to Jobs mode of the risk assessment module

5. Select the "**expand arrow**" next to the Jobs parent folder from the Jobs tree structure

6. Select the "**Job name folder**" from the Jobs tree structure

7. Select the "**Job Report**" button from the RA Toolbar to activate the Jobs module

Figure: Display the risk assessment report
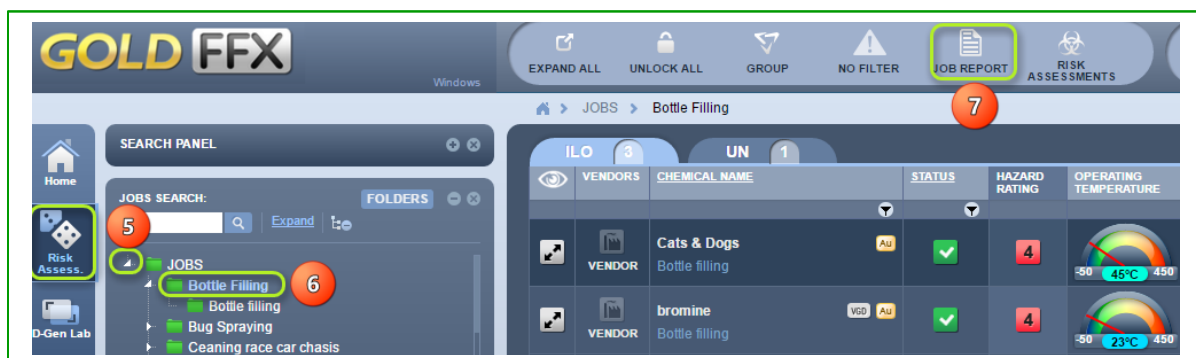
8. Select the **"Risk Assessment Home Page"** button from the Jobs mode toolbar to go back to the risk assessment home page or continue to print or save or email process report

9. Select **"Print** **, Send To** **or Save** **"** button if applicable

Figure: Display the risk assessment Job (Process) Report
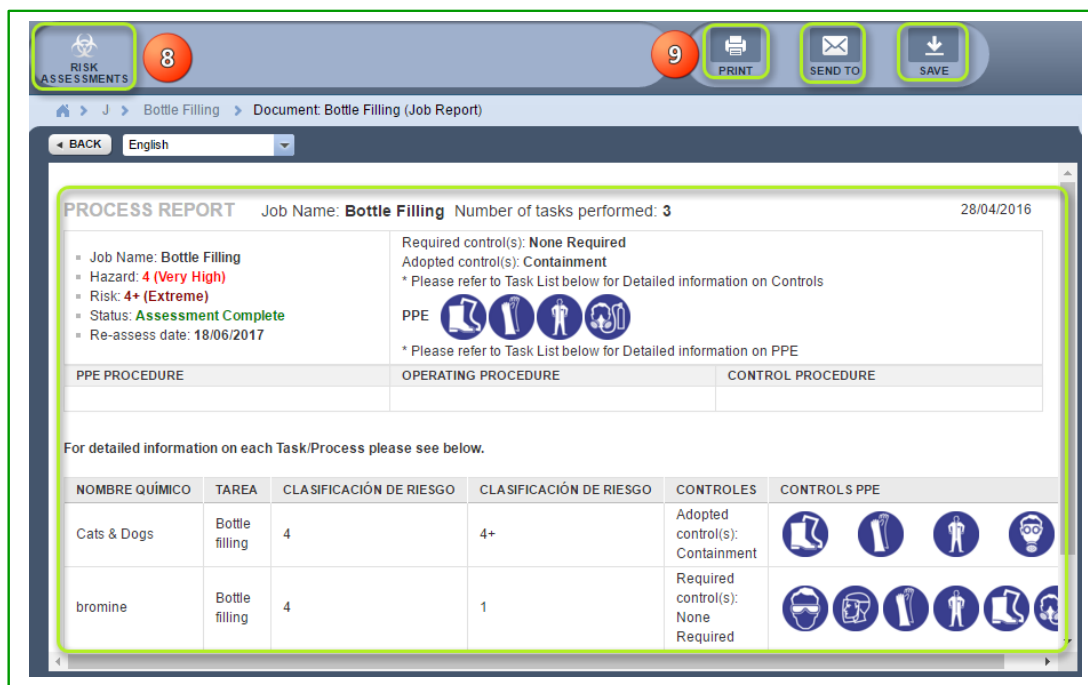
8.2.2 UN (DG) Risk Assessment Mode

The UN (Dangerous Goods) Rating Calculation (Storage and Handling)

The baseline for the calculation stems from the fact that Dangerous Goods bear physical risk when stored or handled, such as fire, explosion or hazard spillage, accidents, hence the analogy is entirely built from the DG Class and Packing Group codes. The Packing Group is set to provide the appropriate level of control by default and calculate the Risk Band (risk conclusion). The amount of substance affects the level of risk, which ranges *[0 - 4+]*.

Figure: UN (DG) Risk Assessment Mode

Materials that are registered in folders are automatically calculated based on the Dangerous Goods Grouping Method provided in the table below.

Hazard Rating	DG Class Grouping Method	Packaging Group (PG)	R codes	Additional Data
0	None	None	None	None
1	None	No PG Group		any of R50 or R51 or R52 or R53
2	2.2 or 3 or 4.1 or 4.2 or 4.3 or 5.1	III or None		and / or R44
3	3 or 4.1 or 4.2 or 4.3 or 5.1	II		
4	2.1 or 2.3 or 3 or 4.1 or 4.2 or 4.3 or 5.1 or 5.2	I		
4+	1.1 or 1.2 or 1.3	Not Applicable (DG Class Overrides PG)		

**Steps: Conduct a dangerous goods (UN) risk assessment**

1. Select the "**RA**" module button .

2. Select "**folder/store**" name that contains material to be assessed.

3. Press the "**UN**" tab above the *Materials Table.*

4. Select the *"Expand"* icon to expand the row.

5. Select the "**locked key**" icon ![icon] to open risk assessment.

6. Click on the **"Task"** icon ![icon] to assign a task for the risk assessment.

Figure: Conduct a UN (DG) risk assessment

7. A Task Pane lists 15 parent tasks to choose an applicable task. Click on relevant task name switch icon ![icon] related to the use of the material. Click on the task name from the expanded parent task. In this case, general storage is selected.

Figure: Conduct a UN risk assessment – assign a task

Note that the task switch will change from red ![icon] to green ![icon] when a task is applied and the task name is displayed below the chemical name.

![warning icon] If a related task does not show in the task list, you can create your own task by using the "user defined" option in task list number 16 and switch it on.

8. Select the **"Close"** icon on the task panel

9. Drag on the **"Operating Temperature gauge"** to desired temperature level [gauge] or click on the text field to type applicable temperature value [-50 | 20°C | 450] to *25°C*

Notice that if the standard temperature of 20°C is increased, it automatically affects the volatility of the chemical (in this case, a liquid)l. In this exercise, 25°C increases the volatility from medium to high. Take note of the default risk assessment parameters with risk band rating at 2 (moderate [2]) before applying changes.

Figure: Set risk assessment operating parameters and controls

10. Set the **"Scale of Use"** to unit measure (millilitres, *litres*, or tonnes) by mouse rolling the barrel
11. Set the **"Frequency of Use"** (*daily*, weekly or monthly) by mouse rolling the barrel
12. Set the **"Frequency of Use"** (<30mins, 30-60mins, *1-4hrs*, or >4hrs) by mouse rolling the barrel

Notice that when the scale of use is set to litre and daily frequency of uses, the risk band changes automatically to rating 3(high, [3]). Applying the frequency of use to exposure period; daily and (1-4hrs) also affects the risk band rating and increases it to rating 4 (very high, [4]) prior to applying controls.

13. Select the **"Controls"** button (set to **'OFF'** by default)

Figure: Set risk assessment controls, compliance checks, dates and internal/external standards
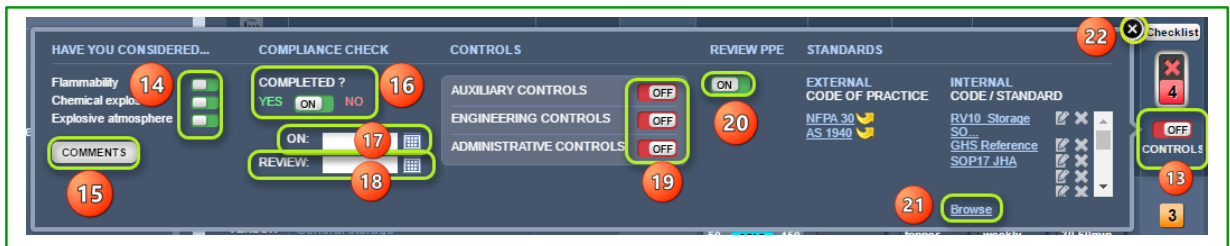
14. Select **"DG hazard consideration"**, buttons for flammability, chemical explosion, and explosive atmosphere as part of compliance checks.

15. Select the **"Comments"** button to add notes about the considerations checks, links to documentation or reference standards, or general commentary notes.
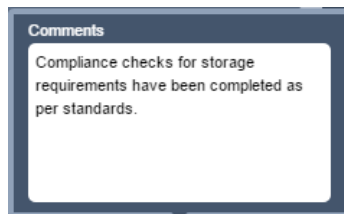
16. Select the **"Compliance Check Status, Yes/No"** switch button

17. Select the **"Calendar"** icon *for the date* of the risk assessment

18. Select the **"Calendar"** icon *for the review date* of the risk assessment

19. Select the applicable "**dangerous goods type of controls**" in place; *auxiliary, engineering or administrative controls*. Multiple controls can be selected from each category. Auxiliary controls have been selected in this exercise. Select the *close icon* once the specific controls have been switched to "ON".
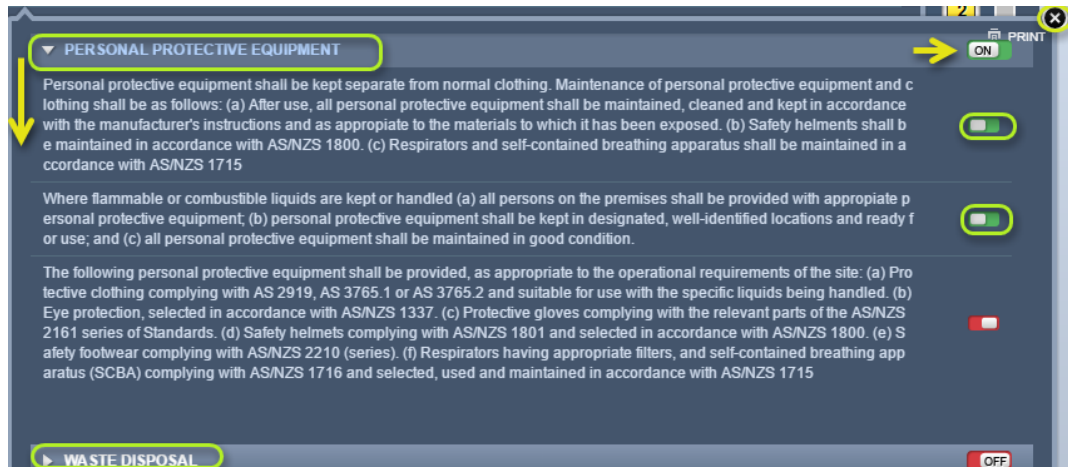
20. Select the "Review PPE" switch button (may be switched to 'ON' by default if there are set PPEs from the (M)SDS or Chemwatch recommendation).

    Review PPEs by turning specific **"PPE switch ON/OFF"** as per the risk assessment and tasks criteria or standard procedure for safety compliance.

    Press the **"Submit"** button to save PPE changes (if any changes are made) and click "OK" button for the saved data.

21. Select **"Browse"** link to insert a document reference website.

22. Select the **"Close"** icon on the controls panel.

23. Apply **"Checklist"** for best use of controls and *close* the panel

    ℹ️ *Note that any selected control from the checklist panel will automatically be generated in the final risk assessment report as "Best Use of Controls".*
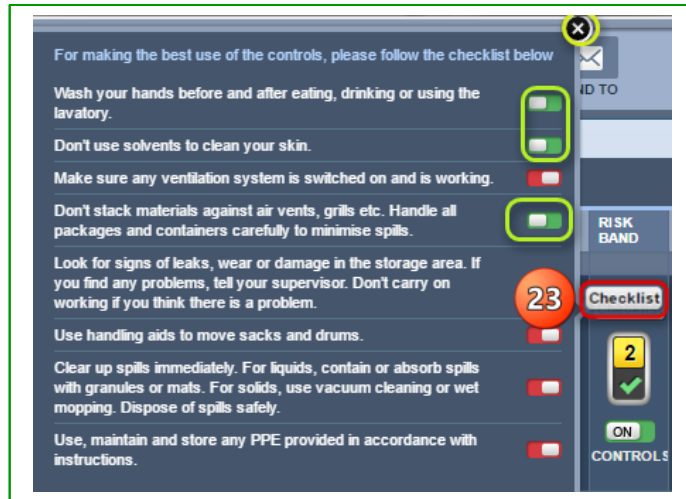
24. Select the **"key lock"** icon [icon] to save the risk assessment.

ⓘ *Notice that the risk band changes automatically to rating 2(moderate [2]) after applying controls.*

25. Select "Yes" button from the saving dialog message to complete the action.
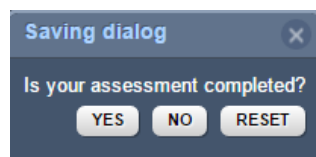
26. Select "Yes" or **"No"** to copy or not to copy risk assessment data to the UN Mode (Dangerous Goods Risk Assessment Mode). In this case, "No" is selected to complete the risk assessment.
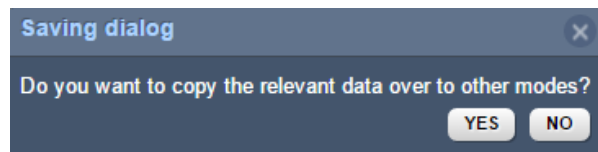
27. Message confirms the *"Risk Assessment data has been saved successfully"* [✓].

28. Select the **"Report"** button [REPORT] to render the *Dangerous Goods Risk Assessment Report* and fill in the Approvals Form if applicable in internal business/organisation procedural requirements.
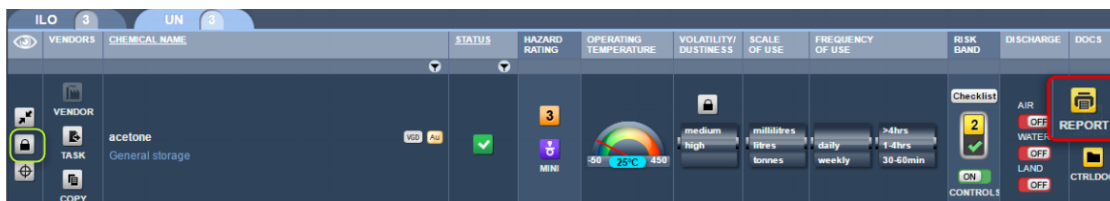
29. Fill in the *Approvals Form and apply signature* (*Refer to the Jobs Report section*).

8.2.3 Display Control Approach Documents

Steps: Conduct a dangerous goods (UN) risk assessment

1. Select the "**RA**" module button .

2. Select "**folder/store**" name that contains material to be assessed.

3. Press the "**UN**" tab above the *Materials Table.*

4. Select the *"Expand"* icon to expand the row.

5. Select the "*locked key*" icon to open risk assessment.

6. Click on the "**CTRLDOC**" icon to assign a task for the risk assessment.

Figure: Display Control Guidance Document

7. Select a "guidance sheet" by clicking on the link from the thumbnails
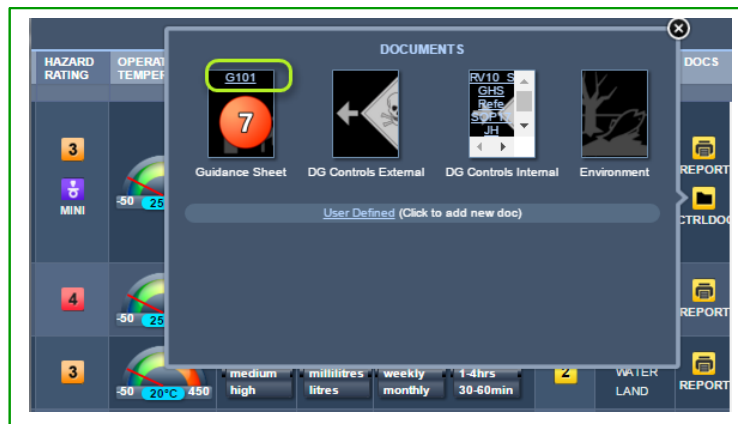
8. **Print**, Send To or Save guidance sheet
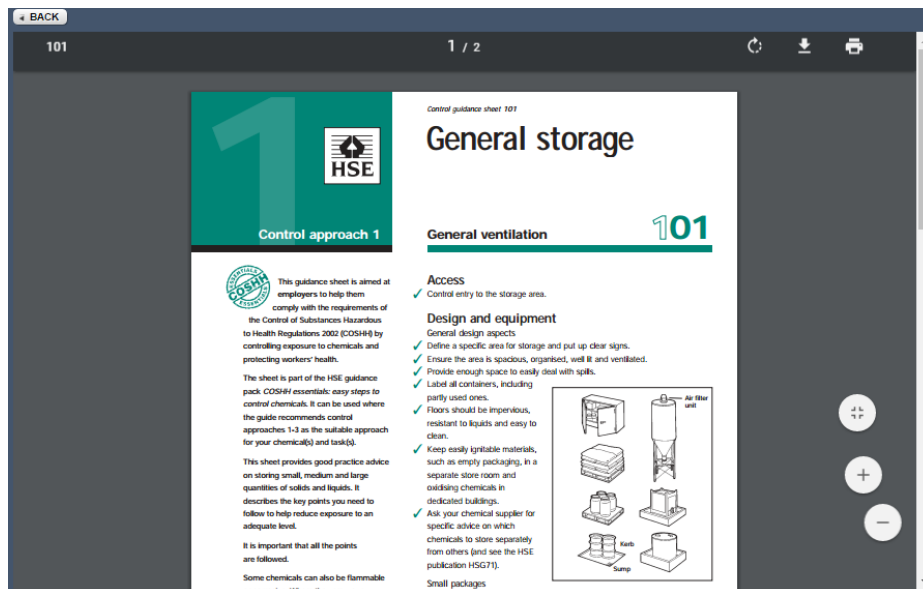
8.2.4   Mouse Right Click Functions in Risk Assessment Module

Description and Use of the "Mouse Right Click Menu" as an edit function

The *Mouse Right Click* functionality allows users to carry out specific tasks for each material in the risk assessment module. The table below provides a summary of the attributes of the mouse right click options available to users.

Figure: Risk Assessment Mouse Right Click Menu on Chemical Name
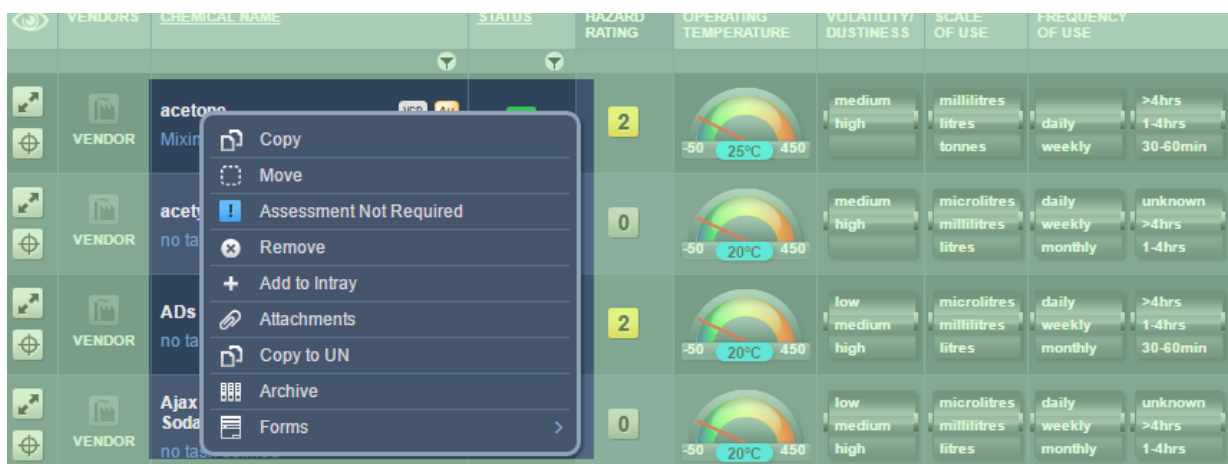
Table: Risk Assessment Mouse Right Click Menu Descriptions in ILO/UN

Menu Options	Description
Copy Copy	Copy single or multiple risk assessment materials into the same folder or another folder. Note that a copied assessment into the same folder will add the same material but will default it to an incomplete assessment. The required action will be to complete the assessment of the copied material.
Move Move	Move single or multiple materials into another folder. The risk assessed material will be moved with all the completed risk assessment parameters.
Assessment Not Required Assessment Not Required	Select this option if the material does not require a risk assessment to be completed. For example, non-hazardous or none dangerous goods do not require a risk assessment. All material assigned this status, will show the icon !.
Remove Remove	Delete a single or multiple risk assessment materials. Note that if a material has been risk assessed and then removed, the material is retained and reverted to the status "Assessment Required ⊘".
Add to Intray Add to Intray	Add material into a favorite's folder called an intray. Refer to the Intray module for more information.

Attachments Attachments	Add attachments (documents) to a material.
Copy to UN Copy to UN	Copy a health risk assessed material parameters into the UN (Dangerous Goods) mode. Note that the copied risk assessed material will have status "Assessment Incomplete ?".

Archive
Archive
	Provides the ability to access an archived repository of the risk assessments for later retrieval. Archive risk assessment documents are stored in pdf format and may be downloaded (saved) or emailed or printed as a batch from the archive panel. Note that in order to create a risk assessment archive; the risk assessed material need to be saved as an "RA Archive Report" first using the main "Save" function.
	
	– List
	  – HTML
	  – PDF
	– (M)SDS
	  – Mini
	– Report
	– To RA Archive

Forms Forms	Fill in an already created Form for Risk Assessments. Forms are created using the Form Builder Module. Refer to the form Builder section of this user guide.

8.2.4.1   Copy a Risk Assessed Material into the Same Folder

Steps: Copy a risk assessed material into the same folder

1. Select the "**RA**" module button .
2. Select "**folder/store**" name that contains material that is already assessed.
3. Press the "**ILO**" tab ILO above the *Materials Table.*
4. Use the *"Mouse right click"* function on the risk assessed material (showing status complete) from the materials (chemicals) table.
5. Select the "*Copy*" option Copy.

Figure: copy a risk assessed material into same folder

6. Select the "checkbox" for the material (chemical name) being copied
7. **"Mouse right click"** on the destination folder, in this case scenario, the same folder will be used.
8. Select the **"Paste"** option

Figure: paste copied risk assessed material into same folder
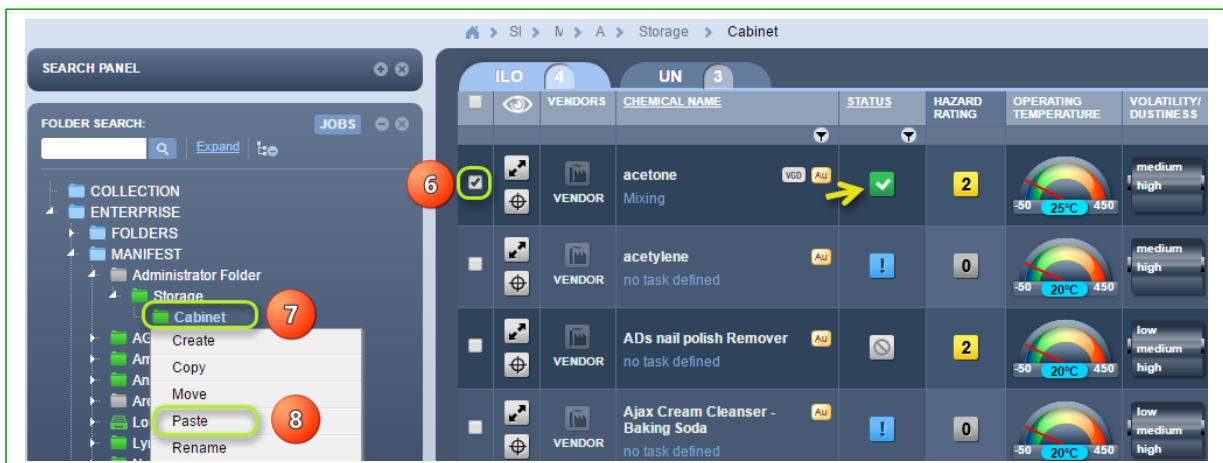
9. Complete the risk assessment of the copied material. *Note that the question a mark icon* ❓ *resembling status* ***"Assessment Incomplete"*** *and the original risk assessed material with the same identical chemical name, e.g., acetone, in this case scenario.*

8.2.4.2 Copy a Risk Assessed Material into the Another Folder Location

Steps: Copy a risk assessed material into the same folder

1. Select the "**RA**" module button .

2. Select "**folder/store**" name that contains materials assessed.

3. Press the "**ILO**" tab above the *Materials Table.*

4. Use the *"Mouse right click"* function on the risk assessed material (showing status complete) from the materials (chemicals) table.

5. Select the "*Copy*" option .

Figure: copy a risk assessed material into same folder

6. Select the "checkbox" for the material (chemical name) being copied

7. **"Mouse right click"** on the destination folder, in this case scenario, a different folder location will be used.

8. Select the **"Paste"** option

Figure: paste copied risk assessed material into same folder
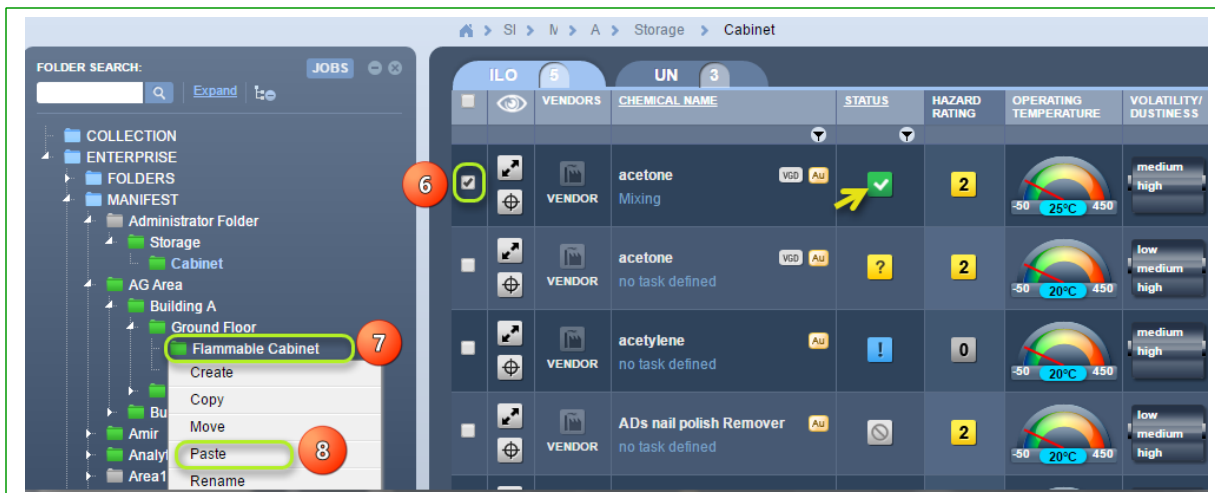
9. The copied risk assessed material displays all risk assessment parameters including "***Assessment Complete***" status ☑ is retained. *Note that the question a mark icon* ❓ *resembling status* ***"Assessment Incomplete"*** *will only display if the same material already existed in the destination folder.*
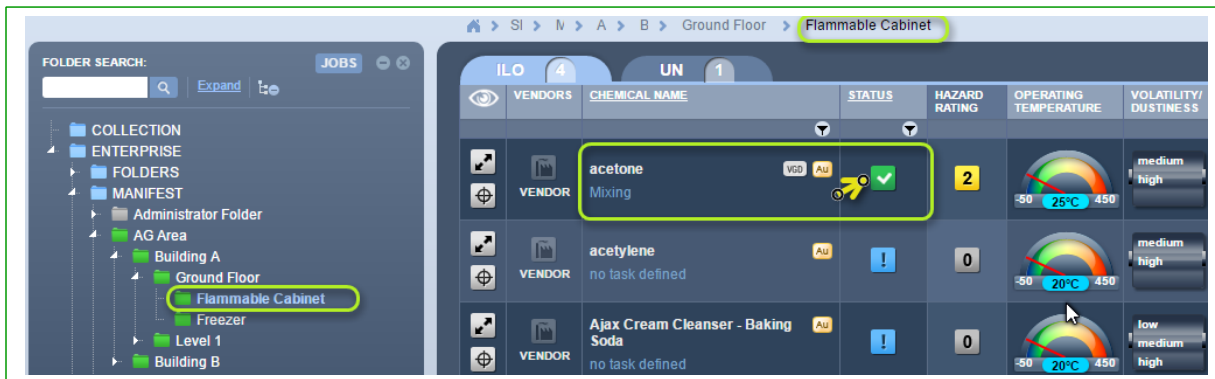
8.2.4.3   Create an Archive for the Risk Assessment Report

Steps: Save risk assessment report into the risk assessment archive

1. Select the "**RA**" module button ![dice icon].

2. Select "**folder/store**" ![folder icon] name that contains assessed materials.

3. Click the "**Save**" button ![save icon] from the RA task bar**.**

Figure: Save risk assessment report into the archive repository
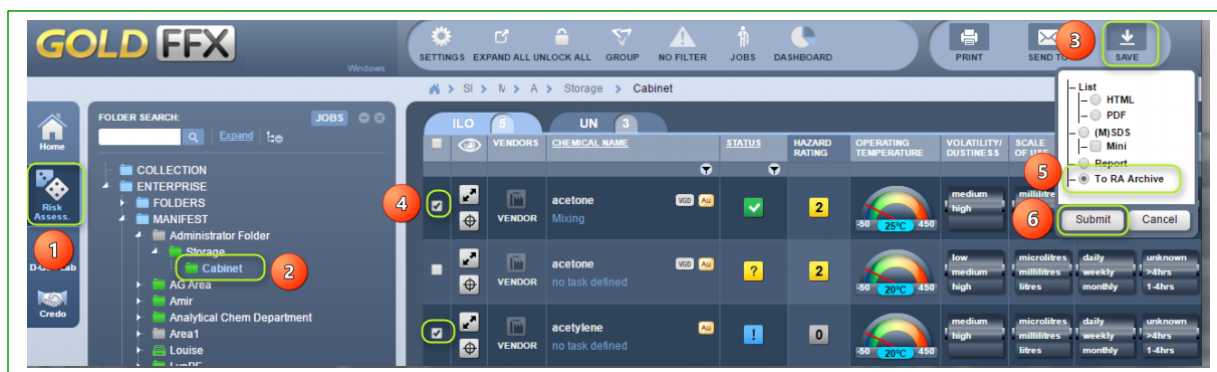
4. Select the "**checkbox**" for the material (chemical name) to be saved to RA Archive.

5. Select **the radio button (circle) "To RA Archive"** to save risk assessment report to archive repository.

6. Press the "**Submit**" button.

7. Select the "**Language**" to be used in the risk assessment reports, e.g., *English*

Figure: Choose language to be used in the archived risk assessment reports
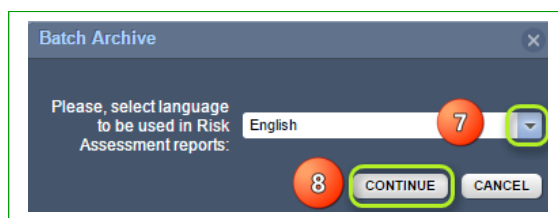
8. Press the "**Continue**" button ![CONTINUE button]. A confirmation message displays that the risk assessment report have been archived.

9. *Mouse right click* on the chemical name that has been archived

10. Select "**Archive**" option

11. Click on single or multiple "checkboxes" for the date of the risk assessment

12. Press the "**Print**, Save or Email" button from the archive window

13. Archive Report is rendered. *Print or Email or Save* report from the acrobat pdf tools.

14. Select the "**Close**" button ![close icon] to close the archive and report windows respectively.
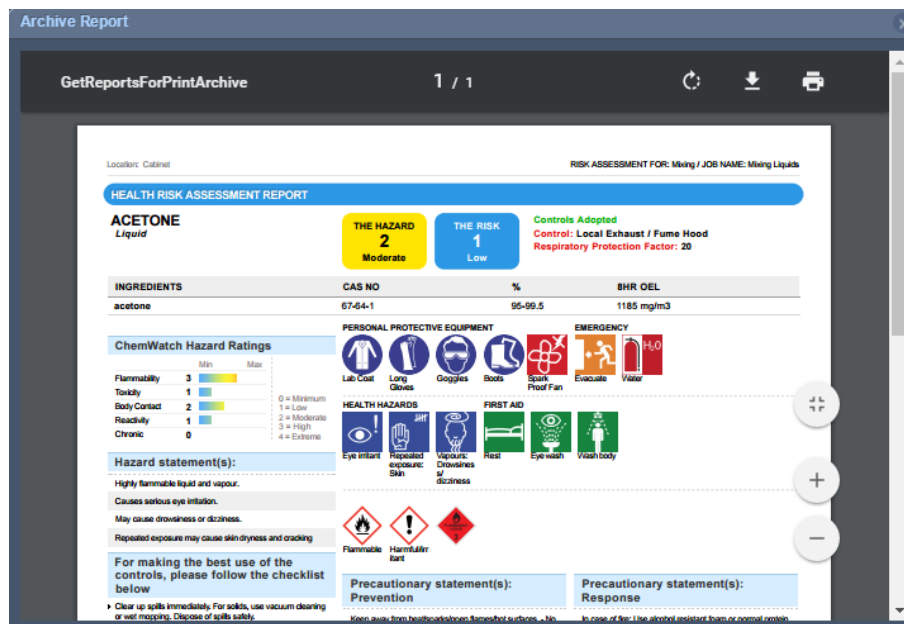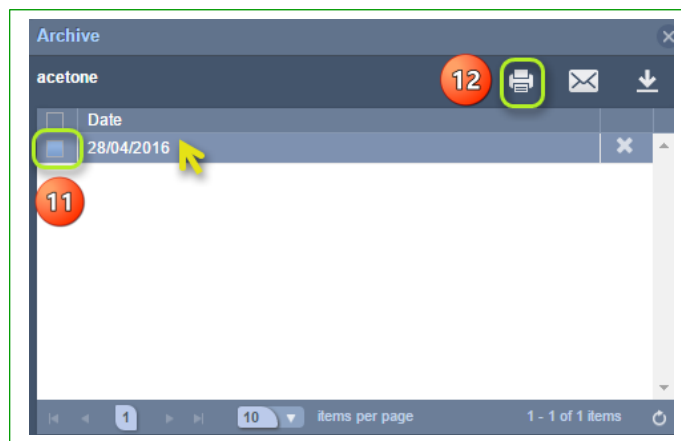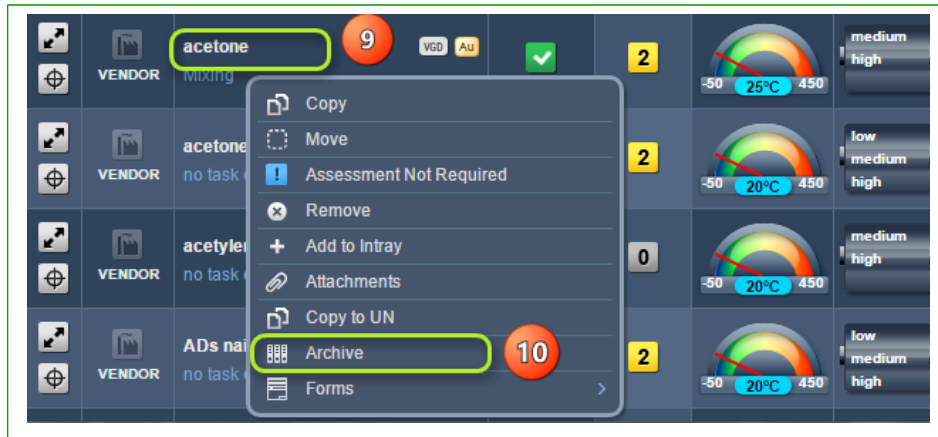
8.2.4.4 Group Materials to identify folder locations

Steps: Group materials to identify respective folder locations

1. Select the "**RA**" module button .

2. Select "**Administrative folder**" or a parent folder or departmental or a storage folder name that contains materials.

3. Press the "**Group**" button on the RA home page toolbar.

4. Select the "**Expand forward arrow node**" next to each chemical name from the grouped rows to display respective folder names where the materials (chemicals) are located.

5. Select the "*Expand forward arrow node*" next to each folder name from which the materials are located and check the risk assessment statuses.

Figure: Group materials from parent folder level to show folder locations

6. Select the "key lock" icon to start conducting respective risk assessment for the material.
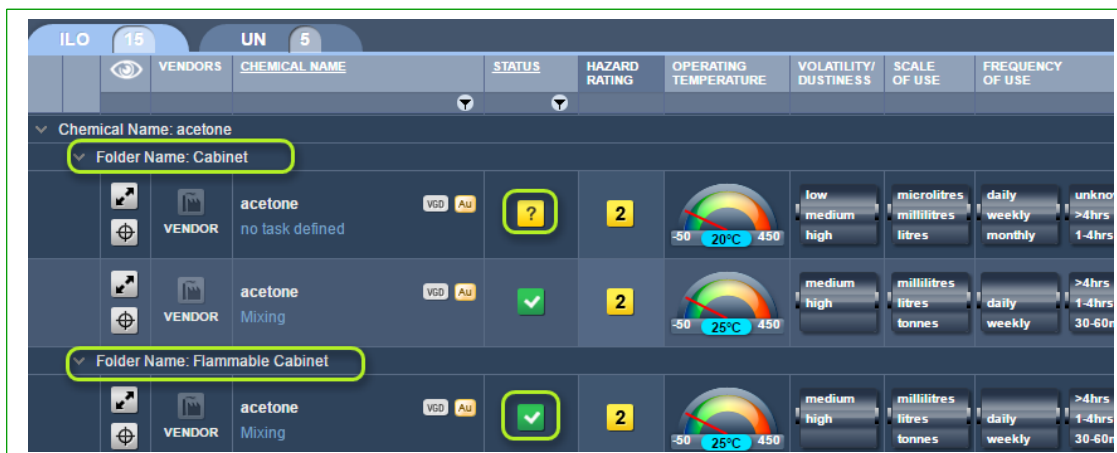
9   Document Generator for Labels (DGEN)

9.1 Overview of the DGEN Module

> **Why is a label so important at the workplace** ❓
>
> A label is used to identify a substance, it is often the initial source of information, presented in a written and or graphic form and is attached or on the outside face of a container. The label enables an employee to identify the hazard and qualities of the contents in a container. So it is important to determine the specific purpose of the label. Is the label for a product used within the organisation only or for products to be sold commercially? If intended for sale, will the product be used domestically or industrially? This will affect the information that is required by legislation to appear. One of the main requirements is to ensure the label is clear, concise and legible to ensure an employee understands the information that appears and that it also complies with the labelling regulations.

 The information on labels appears in English by default; however, the label can be translated into other available languages. The label must remain on the container until it is cleaned to ensure the hazardous substance or hazardous chemical is removed or disposed as part waste removal procedure. Note that Chemwatch also supports GHS Classification and foreign languages. GHS hazard and precautionary phrases can also appear on labels depending on the label format and size. The current ***Code of Practice for Labelling Workplace Hazardous Chemicals*** (GHS); based on the Model WHS Regulations specifies the type of information that is required on labels for various hazardous chemicals so that users of these chemicals in workplaces can identify any hazards associated with the correct classification of the chemical and take appropriate steps to eliminate or minimise the risks during use, handling, storage and transportation of the chemical. The table below provides some links to useful reference information with respect to the respective national codes of practices in Australia.

National Code of Practice	Web address
Labelling of Workplace Substances (based on NOHSC Criteria)	http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/267/CodeofPractice_Labelling_WorkplaceSubstances_NOHSC2012-1994_PDF.pdf
Labelling of Workplace Hazardous Chemicals (based on GHS system)	http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/labelling-hazardous-chemicals-cop
Agvet Agricultural Labelling	http://apvma.gov.au/registrations-and-permits/labelling-codes
Agvet Veterinary Labelling	http://apvma.gov.au/registrations-and-permits/labelling-codes?qt-labelling_codes=1#qt-labelling_codes
Regulators	http://www.safeworkaustralia.gov.au/sites/swa/about/who-we-work-with/regulators/pages/whs-regulators

What information must be incorporated into a label ❓

Special labelling situations are considered where the full labelling requirements do not apply such as small containers. Hazardous chemicals that are supplied in such containers are samples for analysis, decanted or transferred, not explosive articles, etc.; are permitted under the WHS Regulations to use reduced labelling. General label Information includes;
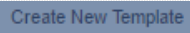
▶ Language written in English
▶ Product identifier
▶ Manufacturer or Supplier's name, Australian address and business telephone number
▶ Identify and proportion disclosed (composition%) in accordance with Schedule 8 for each ingredient
▶ Hazard pictogram(s) applicable to the correct classification of the chemical (GHS pictogram)
▶ Hazard statement(s), signal word, precautionary statement(s) consistent with the applicable classification of the chemical
▶ Hazards first aid, emergency procedures
▶ Expiry date of the chemical where applicable

The Document Generator (DGEN) label tool contains a Search panel, Gallery, Edit Template Tool and Print or Save options. The Search or Folder Tree Panels can be used to assign materials to act as a template when creating your label. In the Gallery , the program contains the following template options: Default labels, User Defined labels and Create New labels.

The DGEN Toolbar

Image	Tab/Button	Description
SEARCH	Search	Search for materials
GALLERY	Gallery	Contains tab options to use Chemwatch default templates, customise default templates or create new label templates.
EDIT	Edit	Edit label template
PRINT	Print	Print label

The Gallery tabs

Image	Tab/Button	Description
GALLERY	Gallery button	Contains tab options to use Chemwatch default templates, Customize default templates or create new templates.
Default	Default Tab	Chemwatch default templates (view list of templates in Appendix).
User Defined	User Defined Tab	Customize existing templates to input your own data or modify margins, edit fields, colour coding, change boundary type or input user dependent text, add shapes, or any additional information.
Create New Template	Create New Template	Create a new template with own size and format and save it into the database for use.

The default template sizes of the labels are set to standard A4 paper size with these dimensions; 210mm width x 297mm height. The following activities cover; how to customize an existing label template from one of the Chemwatch default templates (*1medium Conical label per A4 Landscape page in non GHS)* and creating a new label (*2x4 Label in GHS format*). The steps will help in customising a label template for a material classified as a hazardous substance and a dangerous good and input GHS hazard phrases and hazard graphics into the same label.

Table: Background data to be used in this exercise

Material Name	Classification Data		Label Template	Label Information
Benzene	R36/38 R65 R48/23/24/25 R45(1) R46(2) R11 R67	DGC 3 PGII	1 medium Conical label per A4 Landscape page in non GHS	GHS CLP data, DSD data, Graphics, DG Diamonds, PPE
Notes Kindly note that the program has filter settings set to country=Australia, SDS Format=Local, then you will get the respective data. The mapping for default templates for Classification modality is as follows; The mapping is ***GHS = CLP and non-GHS = DSD/DPD (risk coding system)*** ⚠️ *DSD graphics are not available in the GHS=CLP Label template, but can be inserted by customising the applicable template.*				

9.1.1 Customising and Printing a Label

Activity①: Display Folder/Store List   **ADD MATERIAL INTO ELEMENT**
LIST

Display Label Gallery	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open the D-Gen Label module*	*» click on the D-Gen Lab Module button* [D-Gen Lab]
❷ *Search for a material OR display contents of a folder/store*	*» click on "a folder/store"* *[in this exercise, we will choose material already existing in a location/store]*
❸ *Identify material name in the folder/store list and "Add to List"*	*» click the "Add to List" button to create a list of material to use in generating a label. [in this exercise, we will choose the material already existing in a location/store, e.g. benzene. Add to List will display the material in the Element List pane]*
❸ *Open the Label Gallery to choose label type and format*	*» click the "Gallery" button to load the gallery window to choose type of label and format. [in this exercise, we will choose the 1 conical already existing in a location/store, e.g. benzene. Add to List will display the material in the Element List pane]*

Image display [for the steps above]

Activity ②: Display Label Gallery   *Choose Label Format*

Display Label Gallery: **Select the type of label and format**	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *load the label template and format*	*» move mouse pointer onto the label thumbnail/picture and click on "**Load**" [load label template name, e.g. 1 medium Conical label per A4 Landscape page in non GHS]*

Image display [load label template]
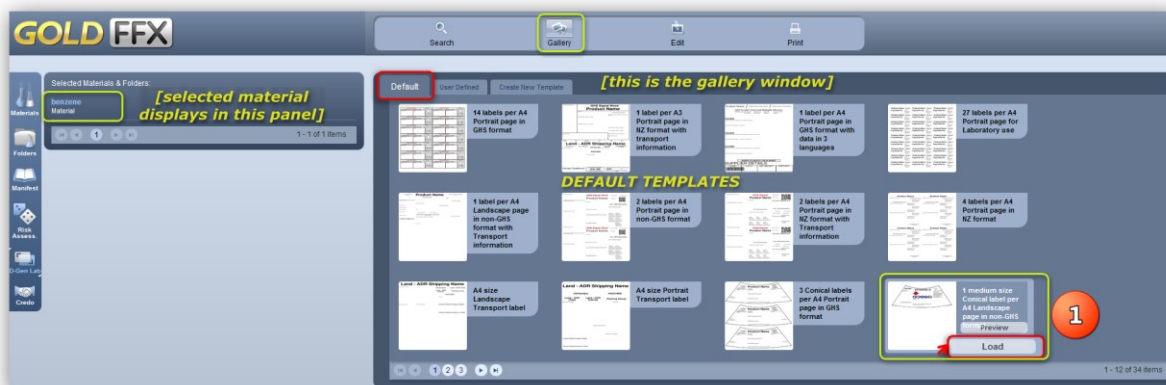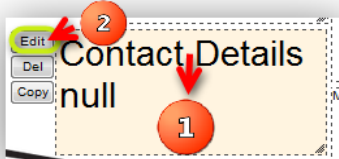
❷ *Customise label template*	*» label template displays the default frames and respective data calculations to render into the label) [the current label has the following data points listed in the table below as background information]*

Label Format Data Points for the Template Frames [Label template name, e.g. 1 medium Conical label per A4 Landscape page in non GHS]	
Template Frames Data points	**Actual Data/Graphics to be filled once label is generated**
Product Name	Material Name or name of the product, e.g. Benzene
GHS Signal Word	Danger or Warning
Chemwatch Number	CW1114 (equivalent to UN number for pure substances)
Dangerous Goods Diamond	DG Class diamond graphic
Risk Phrases	**DSD Classification for physical, health or environmental hazards**
Safety Phrases	**DSD Classification for physical, health or environmental hazards**
GHS PPE Graphics	GHS PPE Graphics
Ingredients	Pure substance will have composition %
General First Aid	First Aid information (general considerations)

Activity Details for Customising Label	Actual Data/Graphics to be filled once label is generated
DSD hazard pictograms	EU Hazard graphics
CLP Hazards	GHS Classification
GHS Graphics	GHS pictorgrams
Contact Details	Emergency Contact Details
Issue date	DOM (date of manufacture, MSDS)

Activity ③: Customise Label Template *Insert Frames and Data Points for Emergency Contact*

Customise Label Template: Insert Frames and User Data [Emergency]	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Edit Contact Details frame [Emergency Information]*	*» click on the Contact Details frame to display edit options*
❷ *Edit details*	*» press "Edit"* *[Edit panel will load **Additional Fields Settings**]*
Image display [edit frame]	
❸ *Enter Contact Details [Additional Fields Settings]*	*» type the contact details in the input value field and customise text settings [choose colour, bold, etc]. Adjust frames where applicable.* *[example provided below]* <table><tr><td>**Emergency**</td><td>**Contact Details**</td><td>**Text Colour**</td></tr><tr><td>*Contact name*</td><td>*Health and Safety Advisor*</td><td>*Red*</td></tr><tr><td>*Tel number*</td><td>*180022222*</td><td></td></tr></table>
❹ *Customise Settings*	*» customise text settings [choose colour, e.g. red, bold, etc]. Adjust frames where applicable*
❺ *Save input*	*» click the save button to save data input*
Image Display [Additional Fields Settings]	

Note:

⚠️ *You can reduce the size of the text frame for contact details and insert border, colour and position the layout.*

Activity ④ : Customise Label Template   *GHS Classification Data*

Input GHS Classification : GHS=CLP, Non GHS = DSD	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Enter data point for GHS Classification* [*Generating Classification data*]	*» click on the Text icon* 🔲 *from the Label Toolbar*

Background Information on the Label Toolbar

Label Toolbar icons and Descriptions		
Label Toolbar Icon	**Icon Name**	**Description**
🔲	Text Settings	The text icon provides a wide range data points to choose from. These data points are fields that can be assigned to the label template to fill the label with information. The main data points are; DG Data, Identification, Ingredients, Physical Properties, PPE, Regulatory, Safety, Supplier Details and User Text. Each of these data points contain

more specific information pertaining to the category of data to choose from.
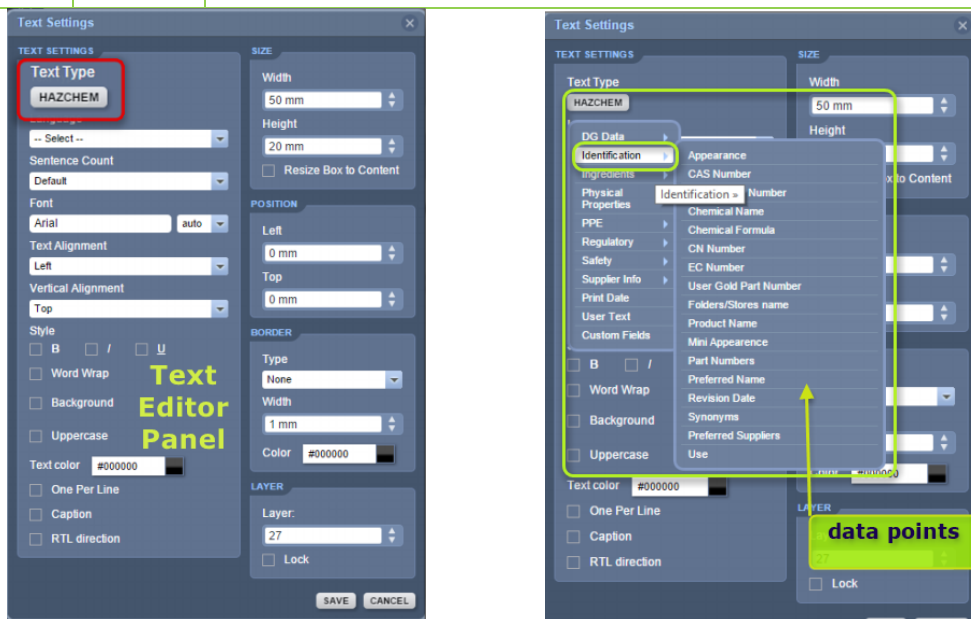
	Graphic Settings	The graphic option allows user to add pictograms and images for DG and GHS data, PPE Information, Chemwatch Hazards bars, Dashboard Statistics, Logos and other custom images into the label. Here are some examples of GHS, PPE and DG pictograms.

GHS Pictograms　　　　DG Diamonds　　　　Personal Protective Equipment (PPE)

	Shape Settings	Shape Settings allow users to apply shapes into the label template and set the size and type of border and colour as well position the shape in the label.
	Barcode Settings	Add custom barcodes and QR codes to the label. Position the barcode field, upload user input where applicable and choose orientation.
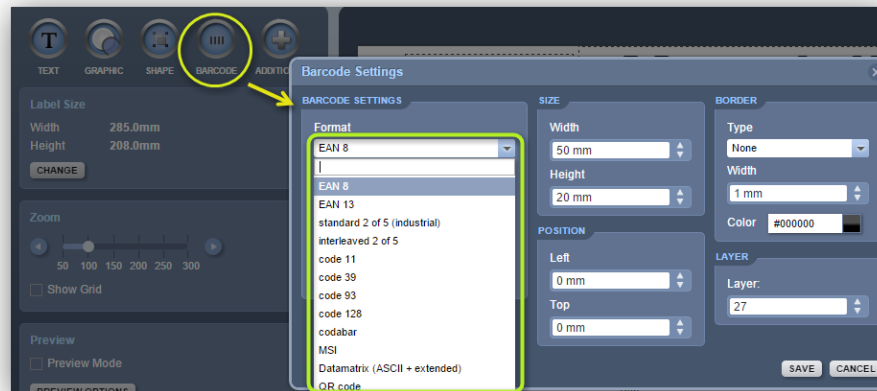
	Addition al Settings	Additional settings provide users with the ability to assign various types of additional information such batch numbers, expiry date, directions of use, contact details and/or user input data and edit settings to edit custom data or upload data.
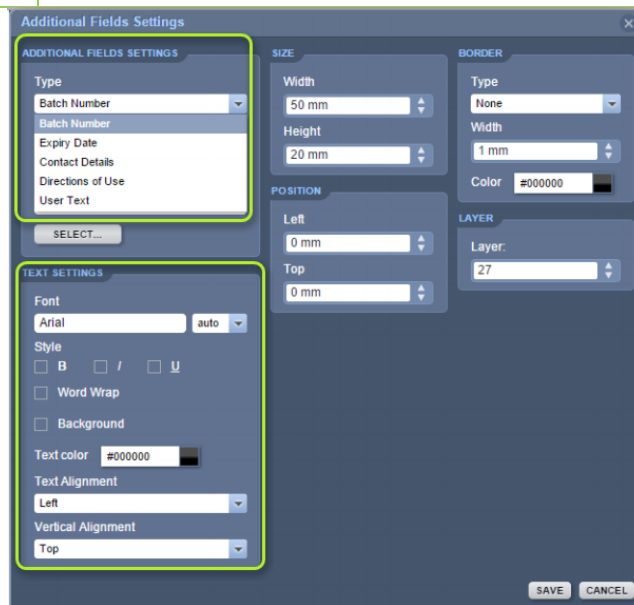
Label Size Panel	
Label size	Set label size in this panel by clicking the change button to assign width or height
Zoom	Set a zoom percentage and show the grid by selecting checkbox to check alignment of the label template fields.
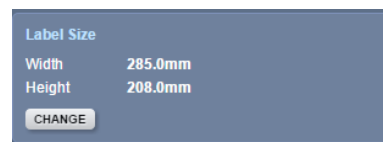
Show Grid on label template	

Show Grid
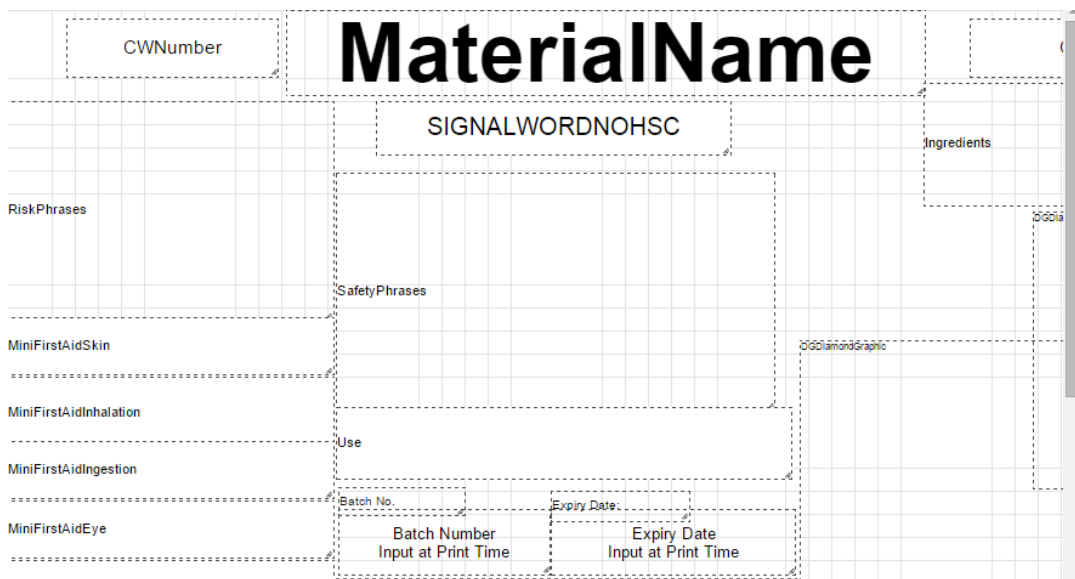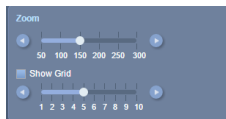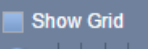
Preview mode	Description
Preview Label	Provides options to preview the template when preview mode checkbox is selected.
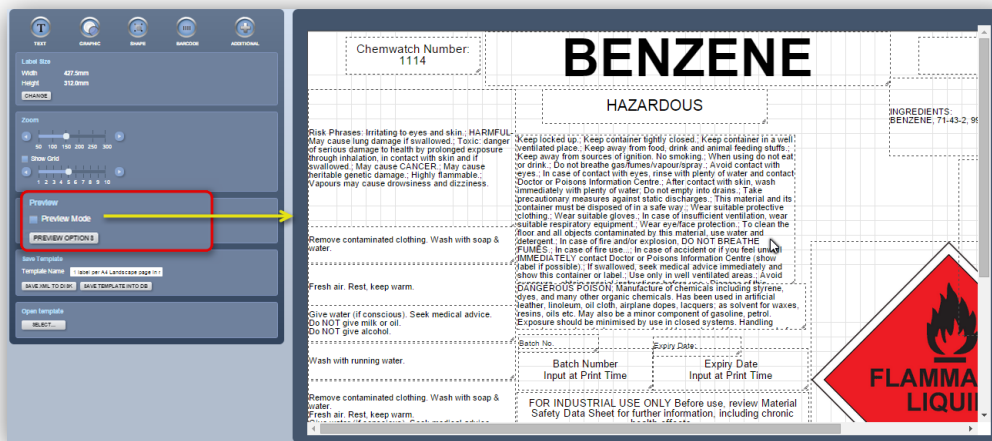
Preview options	The preview options button provides filling text information by setting language, country, MSDS format and choose the material to use for the label

MaterialN

SIGNALWORDNOHSC

SafetyPhrases

SAVE FILL CANCEL

Save Template	
Save Template into DB *(Saves the label template into the database in order to make it available to users and it will be saved into the user defined tab once a new template name is assigned to the label template).*	Assign template name and use the option to save the template into the database. This option is recommended. **Save Template** **Template Name** 1 label per A4 Landscape page in SAVE XML TO DISK SAVE TE SAVE TEMPLATE INTO DB
Open Template	This option allows user upload their own custom label into the database for further use. **Open template** SELECT...
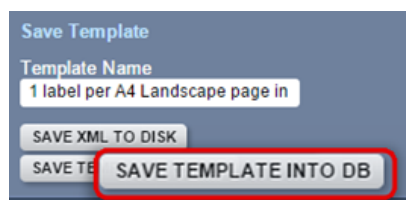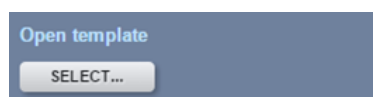
❷ Choose data settings *[example provided below]*	*» click the text type icon from the Text Settings panel* *» [If the material is classified as a hazard, the information will be generated when filling the data]*
❸ Apply Regulatory settings	*» move mouse to select GHS Classification through the arrow path as shown* *» [Regulatory\GH\GHS Classification]*
❹ Save input data	*» save the regulatory settings*
Image Display *[Text settings steps]*	
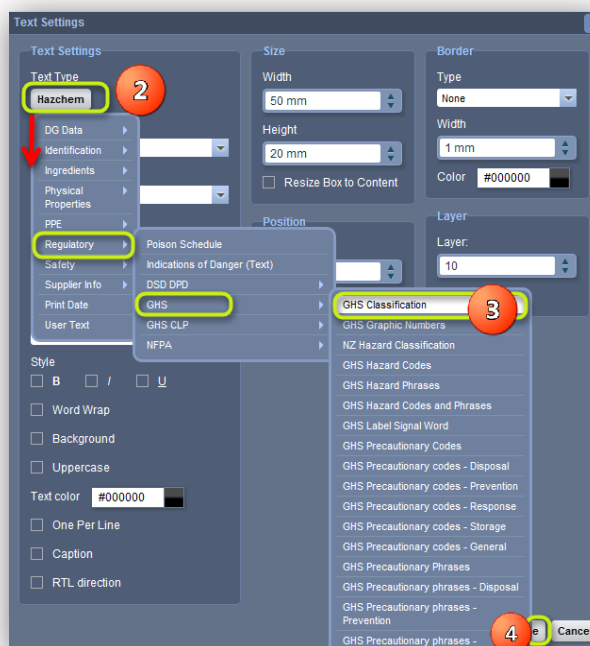
Note:

[Choose language, style and font text, colour, adjust frame sizes, positioning etc. However, you may position the frame manually after saving the data input]

Activity ⑤: Customise Label Template   *EU Hazard Graphics*

Input EU Hazard Graphics : DSD Pictograms	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Input the graphic settings for EU hazard pictogram [hazard graphics]*	*» click on the Graphic icon* *from the Label Toolbar*
❷ *Choose data settings [example provided below]*	*» click the Graphic type icon from the Graphic Settings panel* *» [If the material is classified as a hazard, the information will be generated when filling the data]*
❸ *Apply Hazard and GHS graphics settings*	*» move mouse to select hazard pictograms through the arrow path to apply settings [Graphic type\Label Elements\Hazard Pictogram]* *►Repeat the same steps to apply GHS graphics* *» move mouse to select hazard pictograms through the arrow path to apply settings [Graphic type\Label Elements\Hazard Pictogram]*

❹ *Save input data*	» *save the graphics settings data*
	[align the hazard pictograms manually to a specific position/area on the label by clicking and hold and drag frame to desired position]

Image display [hazard pictograms setting]	*Image display [GHS Graphics setting]*
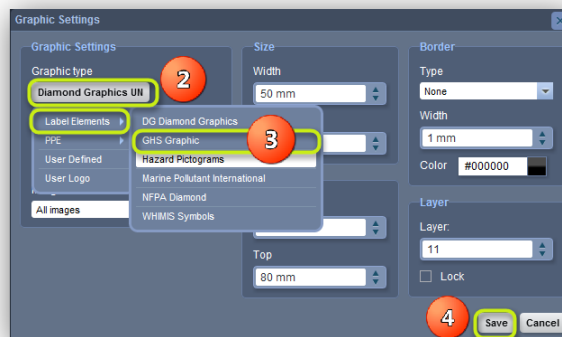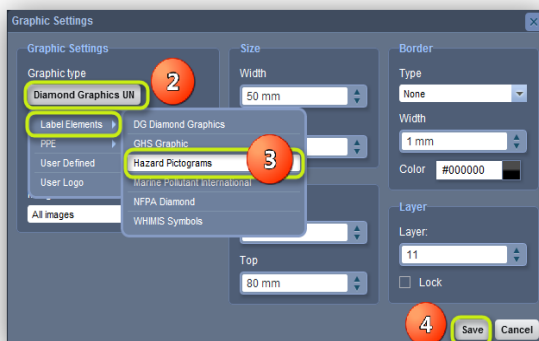
Image Display *[applied data and graphic settings into template]*
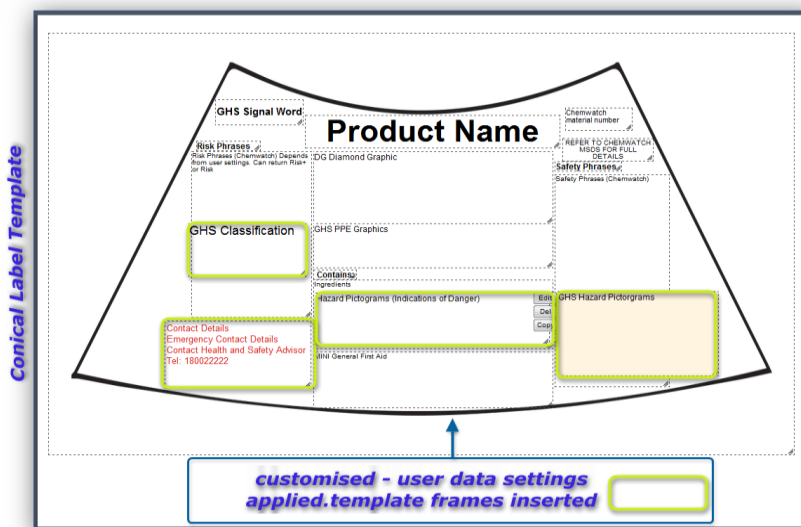
Activity ⑥: Rename Template and Save **Label**   **Fill in the Template and Print**

Save Template and Fill in Data: **Print Label**	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Confirm label information* *[Label Size and Template name]*	» *check the label size and template name* **Note:** • *[rename template to be saved as customised label template in "User*
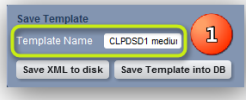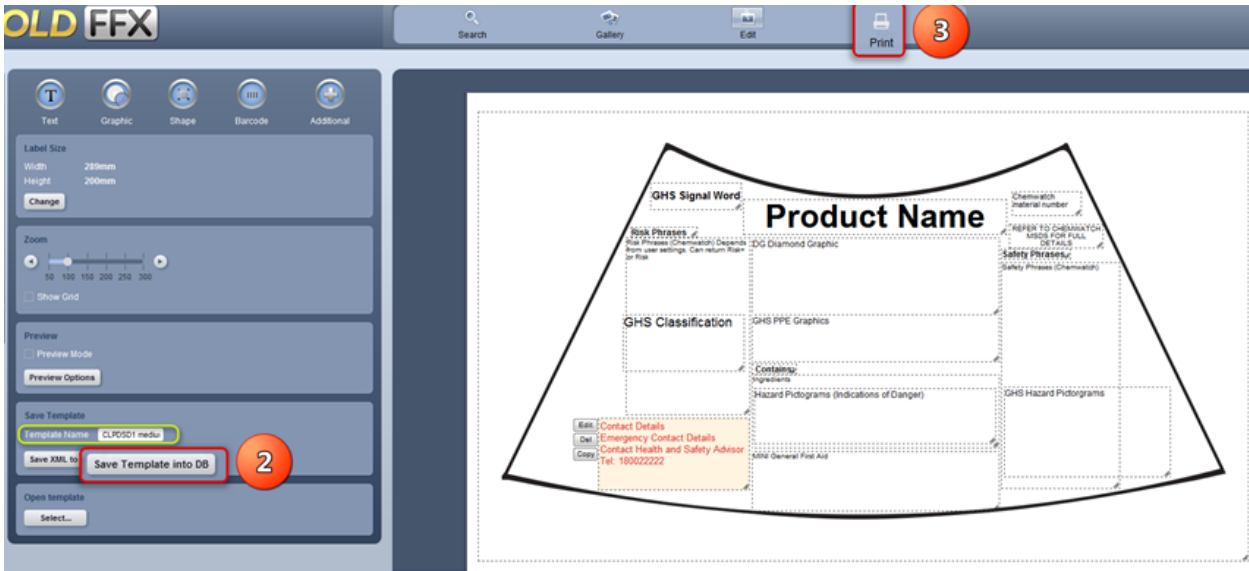
	Defined Tab] • rename template by typing the label new name in the template name text field | Original Template name☐	New Template Name [user defined]
1 medium Conical label per A4 Landscape page in non GHS	CLPDSD1 medium Conical label per A4 Landscape page in non GHS	
❷ *Save template into database(DB)*	*» click the "Save Template into DB" button* *» Saving the template is recommended as it may become useful in the future]*
❸ *Print label template*	*» select the print icon to fill in data and further customise label template* • *selecting print icon allows to choose the material and fill in data to generate the actual based on the default and customised data*

Image Display *[Print template to fill in data]*

Activity ⑦ : Fill Data, Print or Save Custom Label　　　*Generate Label for the Material*

CUSTOM LABEL: **Generate Label for the Material**	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Filling Setting*	*» click on the drop down arrow in the Filling Settings to filter applicable information. [Note that the default data is based on the filter settings for the*

[select data for language/country/material]	application and the material entered in the element list, e.g. benzene]

Language	Country	Material
English	United Kingdom	Benzene

❷ Fill the label template with data	» click on the "**Fill**" button. [Note that the default data is based on the filter settings, text settings, classification settings,, size and frames, format, etc].
❸ Save Label properties	» click on the "**Save**" button.
❹ Print Final Custom Label	» click on the "**Print**" button to finally print the custom label

Image Display [steps to generate label]
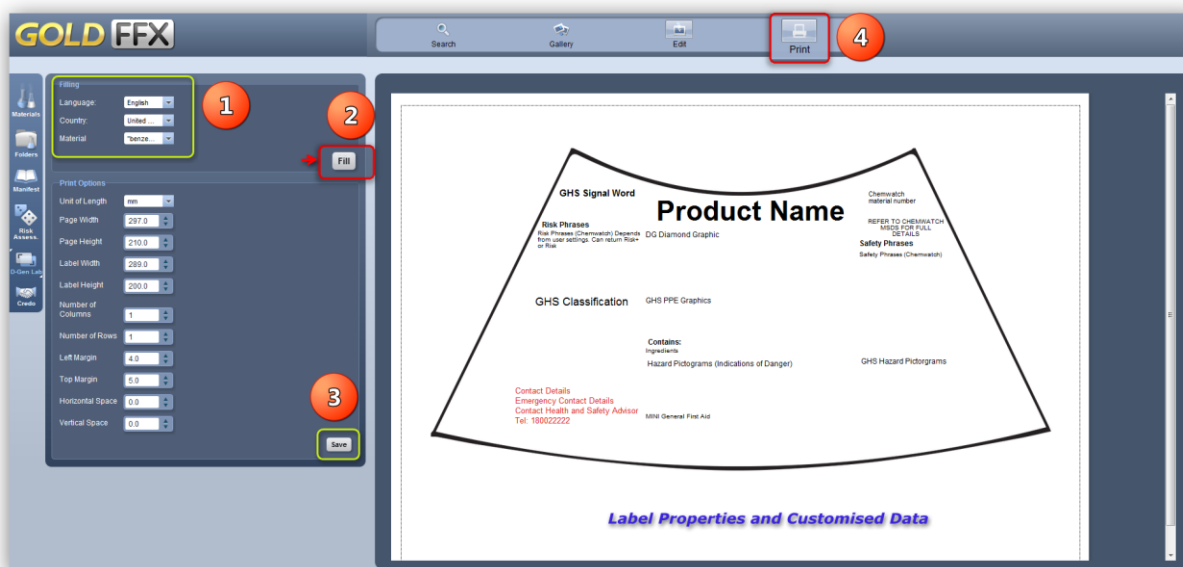
Print or Save Label: *Select the respective icon from the Panel. Note that if you select "Save", the program saved label in the system, however, if you choose "Save PDF" option, then the program will save it in acrobat reader, in turn, you can then use the pdf to save it further into your desktop or external drive for future use.*
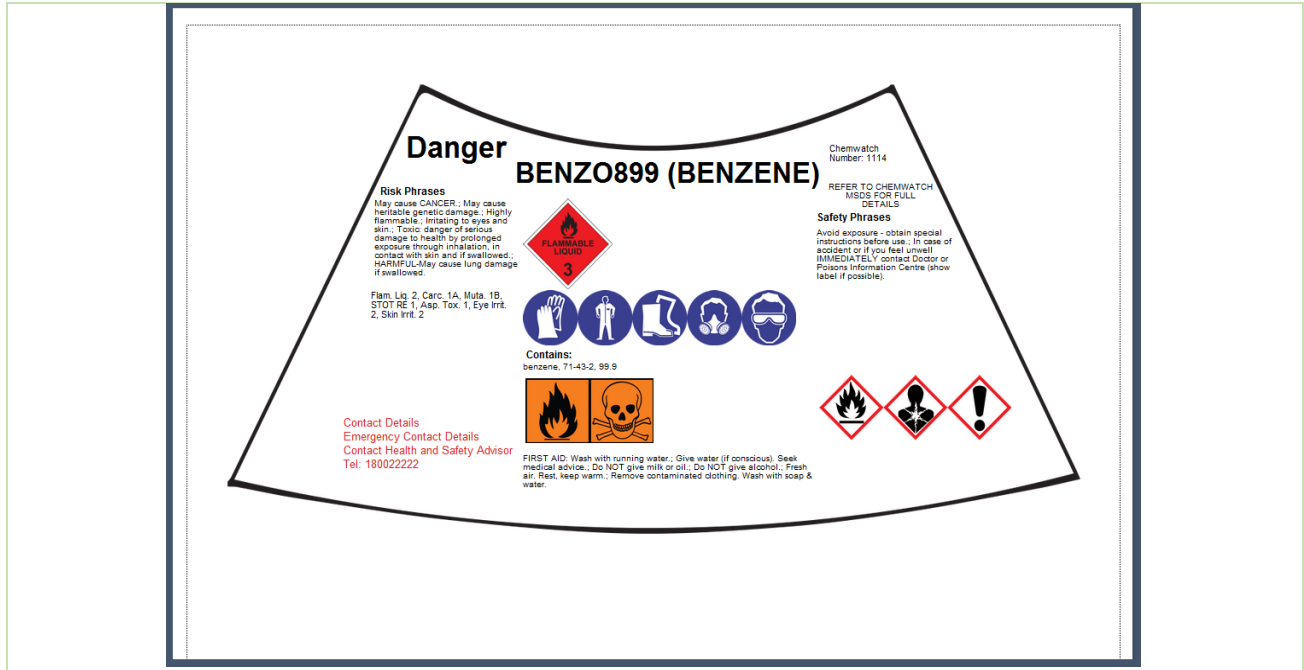
9.1.2 Create a New Label Template and Printing a Label

Creating as new label template encompasses specific template data to be identified with respect to the label size, format, language and the exact label information required to be filled when generating the label.

⚠ If a material is available in the Chemwatch database full collection or own inventory but does not have a Gold (M)SDS available, it is not possible to generate a label.

⚠ Such materials will show a question mark icon [?] in Manifest Materials Table and also that material will show an empty field in the "Add To List" column [ADD TO LIST] in DGEN mode.

The steps below will assist in creating a new label template for a material or product that is classified as a hazardous chemical and a dangerous good and must have a Gold (M)SDS available in the Chemwatch full database collection.

Background data to be used in this exercise.

Material Name	Classification Data		Label Template	Label Information
Benzene	Hazard Codes (H Codes) H315 H319 H340 H350 H336 H372 H304	DGC 3 PGII	2x4 Label in GHS format (A4 standard page)	Product Name, GHS data, GHS Graphics, DG Diamonds, PPE,
Notes Kindly note that the program has filter settings set to country=Australia, SDS Format=Local, then you will get the respective data. The mapping for default templates for Classification modality that we will use for this exercise is the **GHS** ⚠️ GHS is the "Globally Harmonised System for the Classification and Labelling of Hazardous Chemicals.				

Activity ① : Display Folder/Store List **LIST**   *ADD MATERIAL INTO ELEMENT*

Display Label Gallery	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open the D-Gen Label module*	*» click on the D-Gen Lab Module button* [D-Gen Lab]
❷ *Search for a material OR display contents of a folder/store*	*» click on "a folder/store"* *[in this exercise, we will choose material already existing in a location/store]*
❸ *Identify material name in the folder/store list and "Add to List"*	*» click the "Add to List" button to create a list of material to use in generating a label. [in this exercise, we will choose the material already existing in a location/store, e.g. benzene. Add to List will display the material in the Element List pane]*
❸ *Open the Label Gallery to choose label type and format*	*» click the "Gallery" button to load the gallery window to choose type of label and format. [in this exercise, we will choose the 1 conical already existing in a location/store, e.g. benzene. Add to List will display the material in the Element List pane]*
Image display [for the steps above]	

Activity②: Display Label Gallery   *Create New Label Template*

Display Label Gallery: **Select the "Create New Template" tab**	
Action	**Description**
Steps to create a new template	*Tasks*
❶ *Load the new label template*	*» click on the "Create New Template" tab*
Image display [load label template]	
❷ *Design label and Add fields based on the information required*	*» Enter name and template format; e.g. 4x2 A4 Label in GHS Format and click save button*
	» label template displays the default A4 size (210.0mm x 297.0mm) [the current label is empty and format size is also an A4 page]
❸ *Change Label Size*	*» select change button from the label size panel to load the label editor. Assign the label size to the following dimensions.*
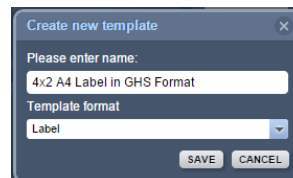
❹ *Edit label template size*

The size of the label in an A4 Page to be used is a 4 rows by 2 columns which fits label width of 100mm and label height of 50mm.

» label template displays the default A4 size (210.0mm x 297.0mm) [the current label is empty and format size is also an A4 page]

» a 4x2 label will fit in A4 page (210.0mm x 297.0mm)with the following dimensions. Enter the following information into the text fields to assign the label dimensions.

Label Dimensions(Editor Panel)

Unit of Length	mm
Page width	210mm
Page height	297mm
Label width	**90mm**
Label height	**50mm**
Number of rows	4
Number of columns	2
Left margin	15mm
Top margin	45mm
Horizontal space	3mm
Vertical space	3mm

Image [label will look like the following image below]
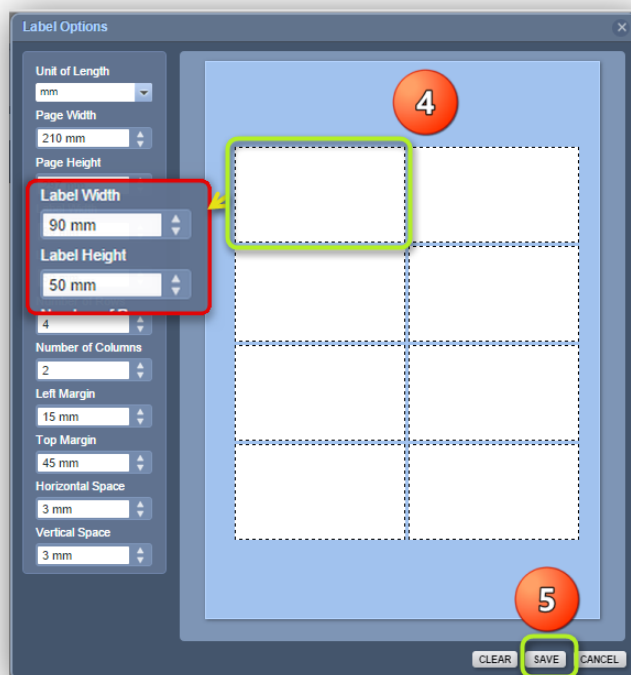
| ❺ Save input | » save label dimensions by clicking on the save button [SAVE] . *Label size displays with new template name [4x2 A4 Label in GHS Format] - see save template panel* » *click on "save template into the DB" to save your new template* [SAVE TEMPLATE INTO DB] |

| ❻ Insert text fields | » *click on the text tool icon to assign text fields. Refer to the details in the label. Note that you may adjust the GHS Label Signal Word dimensions for that text type by centering the frame (drag item to* |

center of the label template or use the label elements, boundary border type, colour if necessary, etc.

Label information fields required to assign the label with respective data points.

Label Format Data Points for the Template Frames [Label template name, e.g. 4x2 A4 Label in GHS Format]	
Template Frames Data points	**Actual Data/Graphics to be filled once label is generated**
Product Name	Material Name or name of the product, e.g. Benzene
GHS Signal Word	Danger or Warning
Dangerous Goods Diamond	DG Class diamond graphic
GHS PPE Graphics	GHS PPE Graphics
Ingredients	Pure substance will have composition %
General First Aid	First Aid information (general considerations)
GHS Hazards Information	GHS classification
GHS Graphics	GHS pictograms
Contact Details	Manufacturer Contact Details

❼	*Insert product name*	*» click the Hazchem button to assign product name field*
❽	*Assign product name*	*» text button» Hazchem» identification» Product name (Material Name)»save*
❾	*Save input*	*» click the save button to save input data field and then check field alignment in the template.* *» align fields by adjusting the frame boundary lines and drag frame to desired position (center the frame)*
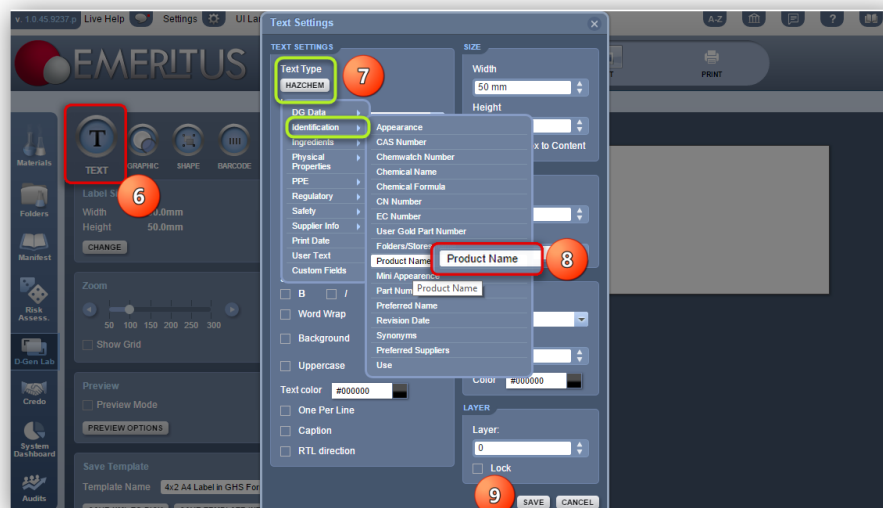
❿ *Continue assigning more text fields based on the table above as shown below.*	*Next fields are: Text button»Hazchem»DG Diamonds» etc.* *Next fields are: Text button»Hazchem»Regulatory»GHS»GHS Label Signal Word»save»align fields by adjusting the frame boundary lines and drag frame to desired position(centre the frame).*
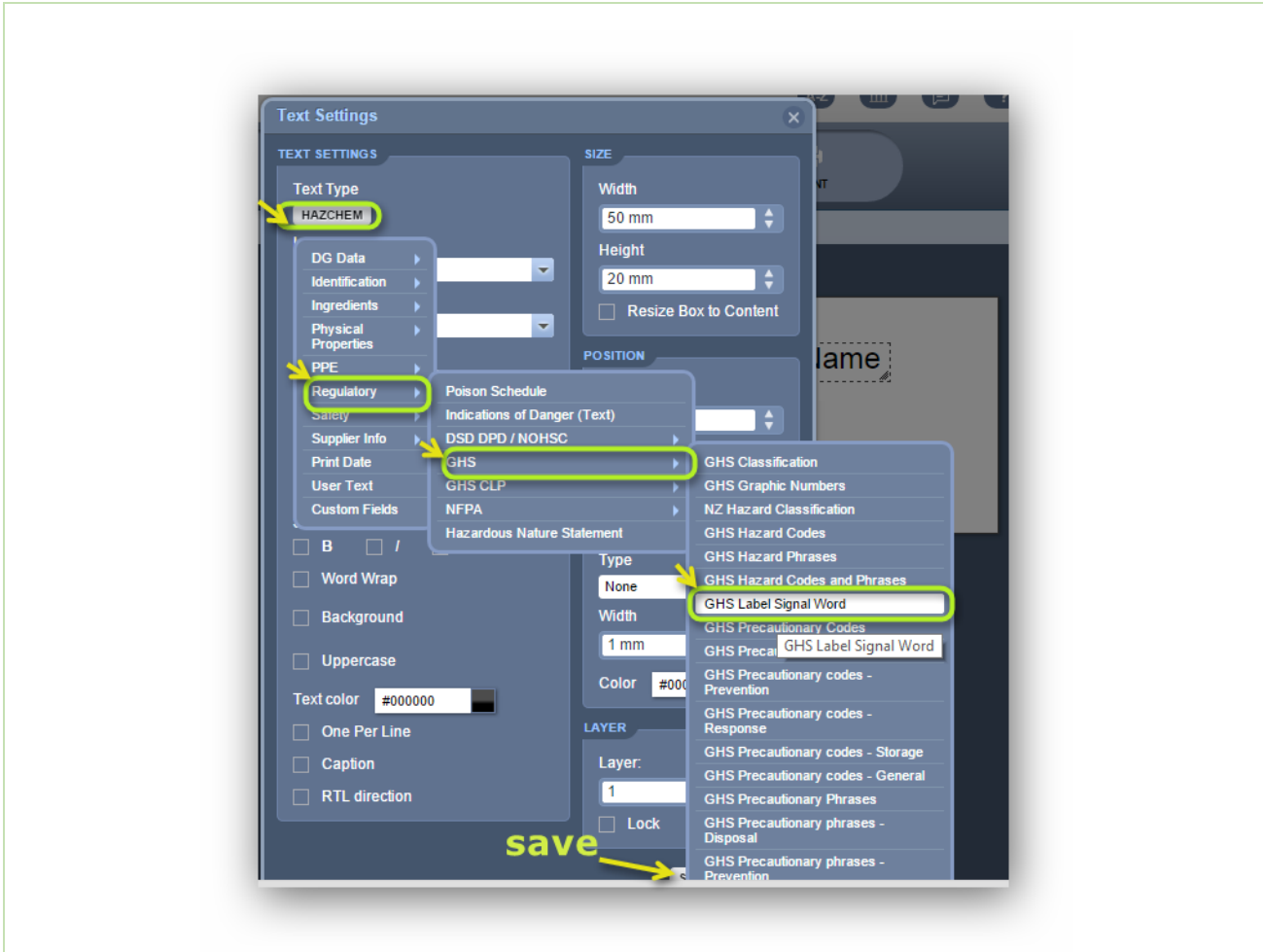
Continue adding data fields: Text button»Hazchem»DG Data»ADG»ADG Class
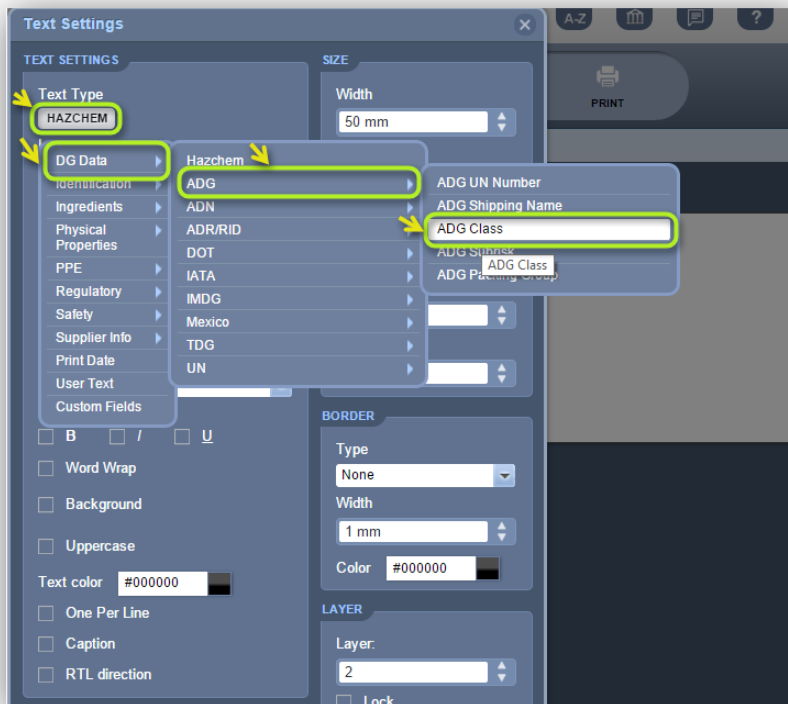
Final Template may look like this one below once all the fields have been assigned in accordance to the label data fields required.
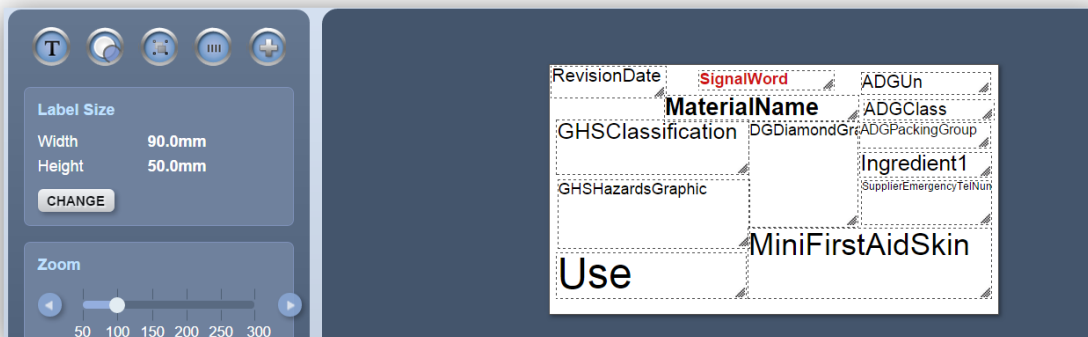
Activity ③ : Fill Data and Print Label Template *Generate Data into the Label*

Fill in Data into Label Template	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Print Label*	*» click on the print icon*
❷ *Fill in the data*	*» Material has been assigned to the fill panel.* *»The next step is to fill the data by pressing the "Fill" button on the fill panel.*
Image display 	
❸ *Print or Save Label*	*» click on print icon or save pdf button to save the label into your hard drive or desktop for reference and further use.*
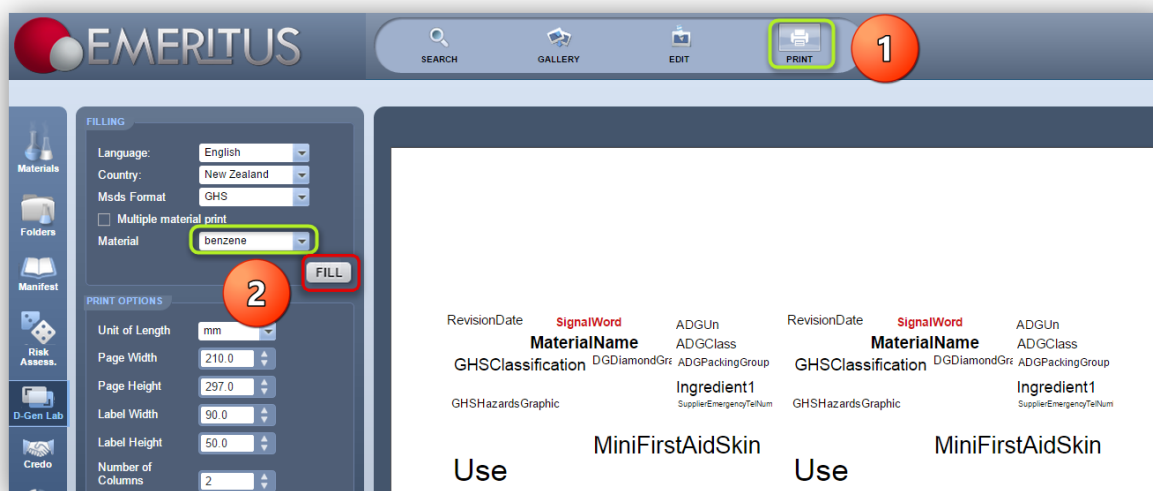
The label download will appear on your bottom left corner of your desktop taskbar area where it shows any downloads and will automatically send it

Open down loaded file from your desktop
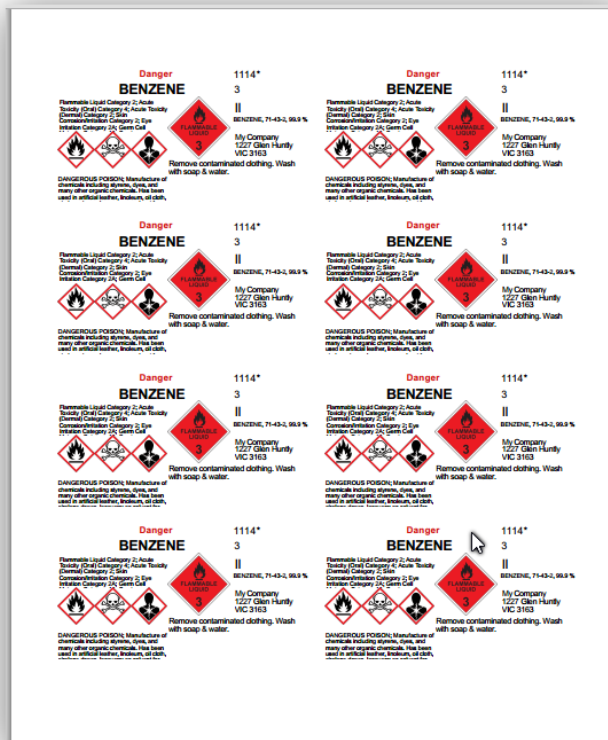
10 The CREDO Module (Classifying Mixtures)

10.1   Introduction to Classifying a Mixture

In chemistry, a chemical substance is a form of matter that has constant chemical composition and characteristic properties. Chemical substances can be pure or mixtures and exist as solids, liquids or gases, e.g. water is pure substance, which can also exist as a solid or liquid or gas. there are also pure chemical compounds, which combine to or more elements into one substance through a chemical reaction. In this module, you can generate a label for a specific concentration of a pure substance if the Gold MSDS for the substance is available in the database. Creating mixtures involves more than one ingredient input with their respective chemical proportions (%) composition of each ingredient. this enables the system to calculate the risks or hazard codes depending on the applicable modality. However, you can always switch the classification display for either modality [GHS/CLP or Risk Code].

By default, the Risk Code classification modality is always used to calculate the resultant risk codes, although there are extra set of risks; Hazard Plus (optional) that can also be incorporated into the calculation. In order to generate a classification of a mixture, ensure that you have all the required basic information on hand to complete the exercise. The activity illustration below; provides steps for classifying a mixture with two ingredients.

10.1.1 Classifying a Mixture and Generating a Label

CREDO is the classify module. The steps will help in creating a simple mixture and generate a label for the mixture.

Background data to be used in this exercise

Item	Material Name	Ingredients	Proportions/%
1	Hydro-Metho mixture	*Hydrogen peroxide*	*3%*
		methanol	*97%*
2	Acetone 5% Concentration	*acetone*	*5%*
	(optional- try this activity)	*water*	*95%*
Notes:	*Credo (classification tool) provides functionality parameters to create a mixture and generate labels; Mini MSDS. Publishing an MSDS is available in the AuthorITe Tool for authoring material safety data sheets. The classify module parameters depend on administrative permissions set for user role, for example, search panel may be optional. AuthorIte is a separate tool within the Chemeritus package.*		
	Mini MSDS (not yet available).		

Activity ① : Classifying Hydro-Metho mixture   *Product Identification*

TAB: PRODUCT IDENTIFICATION	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open the classify (CREDO) module*	*» click on the Credo Module button*
❷ *Open Product Identification tab*	*» click on "Product Identification tab"*
❸ *Enter required details to identify the material*	*» provide the following details* *Required data : Material Name (name of the mixture), catalogue number (any number to enable the reference number for mixture),etc. See below*
Example;	

Product Identification Tab	
Material Name	hydro-metho mixture
Catalogue Number	12345
Issue date	Use default or insert your own date: use calendar icon
CAS No. [Chemical Abstract Substance Number]	Optional. (we will leave field empty for this exercise) Enter substance number if available in CAS REGISTRY. See web address http://www.cas.org/content/chemical-substances/faqs
EC No [European Council Number]	Not applicable in Australia (we will leave field empty for this exercise)
Uses	Fill the information for the 'uses' of the mixture, e.g. laboratory agent
REACH Uses	European standardised uses (we will leave field empty for this exercise))
Synonym	Other name(s) you may provide for the mixture, e.g. hymetho

Image Display
[Product Identification]

Activity②: Classifying Hydro-Metho mixture   *Manufacturers Details*

Action	Description
TAB: MANUFACTURERS DETAILS	
Steps to fill in required information	*Tasks*
❶ *Open Manufacturers Details tab*	*» click on the Manufacturers Details tab* MANUFACTURERS DETAILS
❷ *Enter company details*	*» click on "company name field" to choose from the list (already existing company) or select the add button to enter new company details (if not available from the database)* *[Company details data will automatically populate fields if manufacturer information available within the database]*

Image Display
[Company details]

Activity ③ : Classifying Hydro-Metho mixture

Credite Posteri

TAB: CREDITE POSTERI	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ Open Credite Posteri tab [Material Properties]	*» click on the* *Credite Posteri* *tab* CREDITE POSTERI
❷ *Enter Material Properties and Ingredients*	*» type the name of the ingredients as listed below* *[example provided below]*

Item	Material Name	Ingredients	Proportions/%
1	Hydro-Metho mixture	*Hydrogen peroxide*	*3%*
		methanol	*97%*

Image Display
[Ingredients and Material properties]

Note:

⚠ *Credit Posteri (material properties) are a requirement when authoring an MSDS. In this example, we only permitted to create a mixture and generate label for the mixture. If have the properties of the material, please provide them and the respective ingredients and their proportions.*

Activity ④ : Classifying Hydro-Metho mixture   *Review Ingredients*

TAB: REVIEW INGREDIENTS	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open Review Ingredients tab [Generating Classification data]*	*» click on the Review Ingredients tab* REVIEW INGREDIENTS
❷ *Enter Ingredients information* *» [If the material ingredient exists in the database, a drop down list will display and then choose applicable ingredient name]* *» [enter the ingredients' proportions % composition in this mixture]*	*» type the name of the ingredients as listed below and respective proportions % [example provided below]* <table><tr><th>Item</th><th>Material Name</th><th>Ingredients</th><th>Proportions/%</th></tr><tr><td>1</td><td>Hydro-Metho mixture</td><td>Hydrogen peroxide</td><td>3%</td></tr><tr><td></td><td></td><td>methanol</td><td>97%</td></tr></table> *[In this example; we will maintain the standard review in accordance with Chemwatch defaults – other ingredients settings are OFF]*

Note:

⚠ *[Review Ingredients. If the material exists in database , world wheel displays list to auto-complete name of ingredient. Classification risk codes display for each ingredient where applicable]*
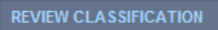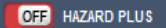
Image Display
[Ingredients and proportions %]
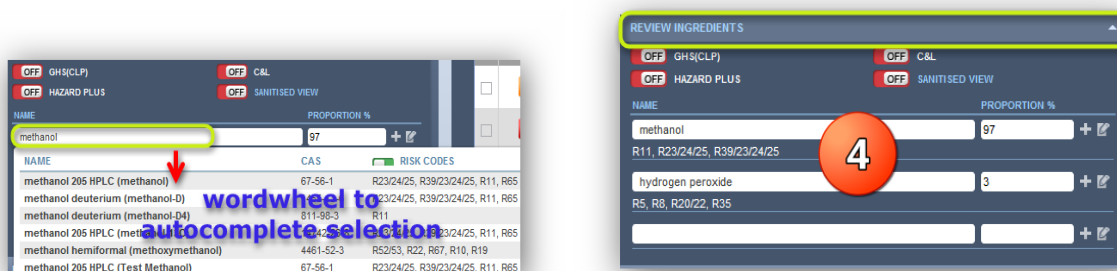
Activity ⑤ : Classifying Hydro-Metho mixture   *Review Classification*

TAB: REVIEW CLASSIFICATION	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open Review Classification [Review generate classification data for the mixture]*	*» click on the Review Classification tab* REVIEW CLASSIFICATION
❷ *Accept default classification data* *» [default classification data is generated by Chemwatch calculations based on Risk Code hazard classification or GHS hazard classification system.*	*» type the name of the ingredients as listed below and respective proportions %* *[example provided below]* | **Mixture**	**Classification Data**	**Ingredients**	**Proportion**
---	---	---	---
Hydro-Metho mixture	R23/24/25, R11, R39/23/24/25	*Hydrogen peroxide*	*3%*
		methanol	*97%*	 *[In this example; we will maintain the standard review classification provided by Chemwatch in accordance with Risk Code Classification –settings are **OFF**] Chemwatch also provide extra risk code classification where applicable through the **Hazard Plus** option]* OFF GHS(CLP) OFF HAZARD PLUS

Note:

⚠️ *[Review Classification. If the material exists in database , classification data will display by default to risk codes data, however, for jurisdictions requiring GHS classification data, use GHS(CLP) and trun the switch ON* ON GHS(CLP) *to activate classification data, which includes Australian GHS]*

Image Display *[Risk Code Classification Data]*   **Image Display** *[GHS Code Classification Data]*
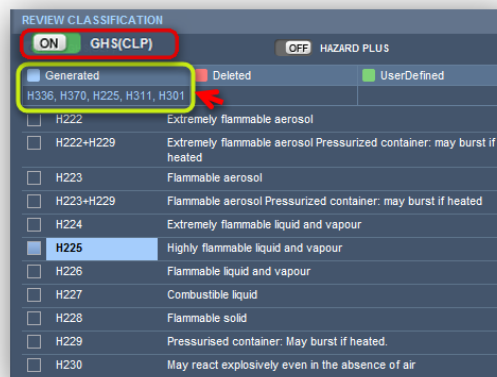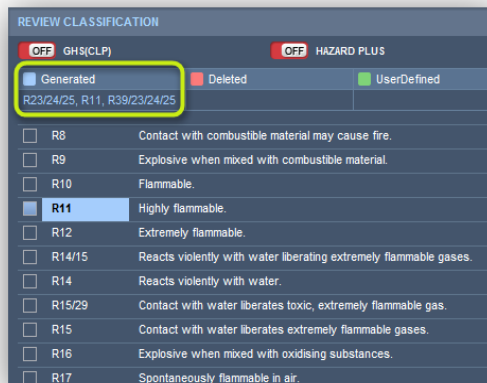
Activity ⑥ : Classifying Hydro-Metho mixture   *Dangerous Goods Classification*
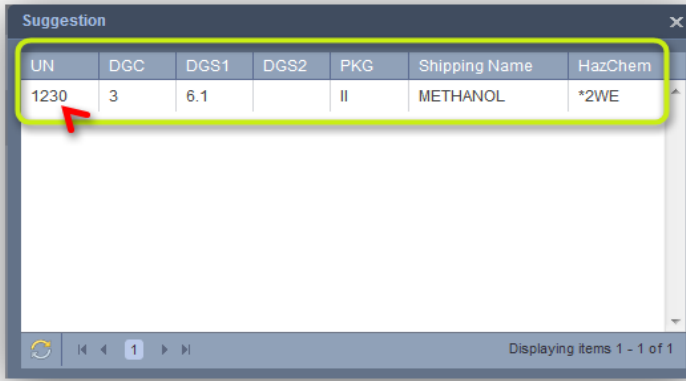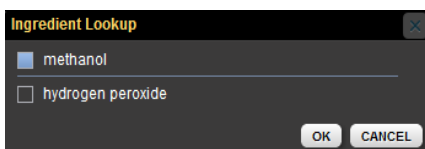
TAB: DANGEROUS GOODS	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open Dangerous Goods [Generate classification DG data for the mixture]*	*» click on the Dangerous Goods tab*
❷ *Look up DG classification data* *» [default DG classification data is generated by Chemwatch based on existing articles/materials classified as dangerous through the UNDG classification system]* *Note:* ⚠ *[DG classification data is essential for the mixture as it also contains a high composition of DGC3, PG II for methanol]. This information will automatically be generated in the label report as part of the communication pictograms, signage or diamond for storage. The images will depend on the type of label format chosen in the label panel.*	*» type the name of the ingredients as listed below and respective proportions % [example provided below]* <table><tr><th>Mixture</th><th>Classification Data</th><th>Ingredients</th><th>Proportion</th></tr><tr><td>Hydro-Metho mixture</td><td>We will use "Methanol" with high ingredient % composition to generate DG data</td><td>Hydrogen peroxide Methanol UN1230 DGC3 PGII</td><td>3% 97%</td></tr></table> *Search by UN number to look for classification data>select UN number to load data* *[you can also use the* **ingredient link** *look up option to search for available classification data for the material ingredients]* *[select ingredient checkbox alongside material name to apply ingredient look up]*

Image Display *[DG Classification Data]*

SUBMIT CLASSIFICATION DATA: GENERATE THE MIXTURE

» click on the SUBMIT button

[Hazard and DG classification data for the mixture rendered in the in the materials grid including the hazard colour coded icon].

Click here *to learn more about hazard colour coding in Chemeritus.*

Activity ⑦: Label for the Classified Mixture   *Generate Label for the Mixture*

LABEL: GENERATE A LABEL FOR THE MIXTURE	
Action	**Description**
Steps to fill in required information	*Tasks*
❶ *Open SDS button* *[Generate label for the mixture]*	*» move mouse pointer over the SDS button* *» click on the LABEL icon*

Image Display
[Material List Classification Data]

❷ *Select default label template*

» [choose the default template format from the gallery to generate label information]
» move mouse pointer over the desired label template thumbnail and click **submit**
*[example provided below to generate a label for a "**3 Conical Label per A4 Portrait page in GHS Format**]*
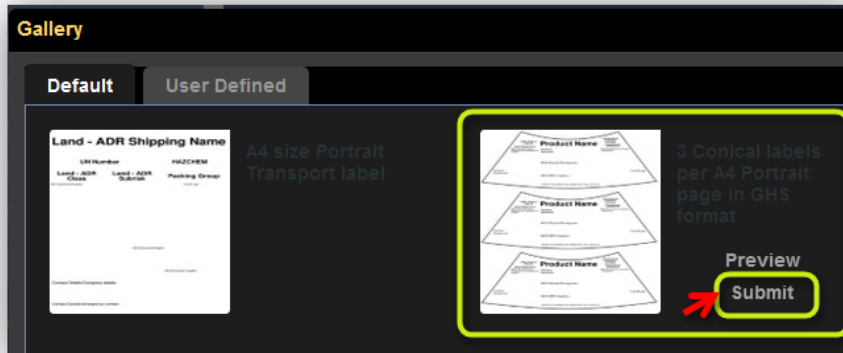
Image Display *[Label generated in acrobat pdf]*

["3 Conical Label per A4 Portrait page in GHS Format for the mixture "hydro-metho mixture"]
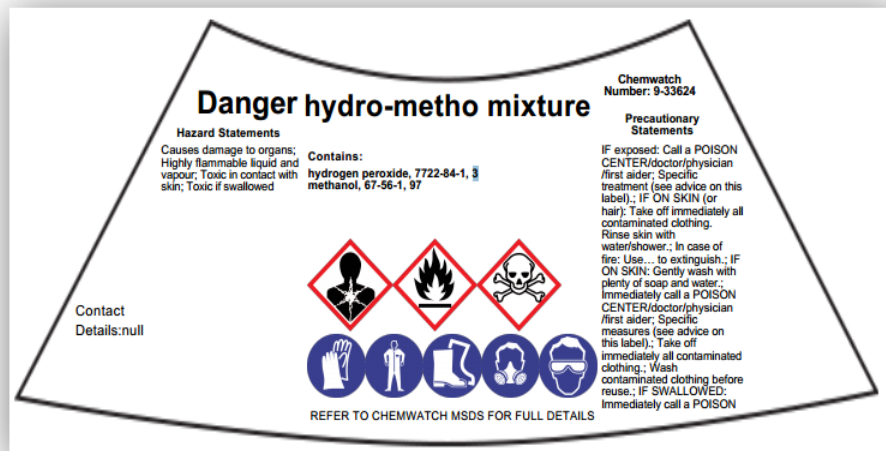
Print or Save Label: *Select the respective icon from the pdf toolbar*

11 The Intray Mode

The Intray is a storage area, where user can create Intray folders to keep materials in order to access various types of reports. The Intray folders can be used as a temporary collection of materials for later viewing or retrieval. The Intray button is available in the Search Panel in Materials Module, Folders Module, Manifest Module and Risk Assessment Module. The activities below illustrate how to create an intray and add materials into it and display of various types of reports.
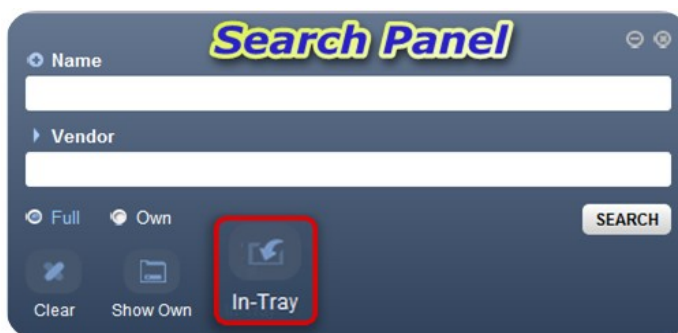
11.1 Creating an Intray

The following steps illustrate how to create and edit an intray.

INTRAY	Activities⇩ [create an Intray]	Descriptive Content
Activity ①	⇨ **Select Intray button** to load panel and create an Intray	
Steps	❶ select Folders Module ❷ click on the Intray button within the Search Panel to load the Intray panel [Intray name could be related to the type of materials you add to it] ❸ click on the add button ADD ❹ type the "**Intray Name**", e.g., Fire Fighting to create an Intray folder ❺ click the save button	Intray name such as 'Fire Fighting' is used to add materials that relate to Emergency into it the intray folder
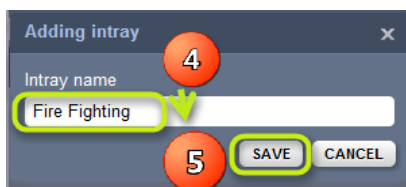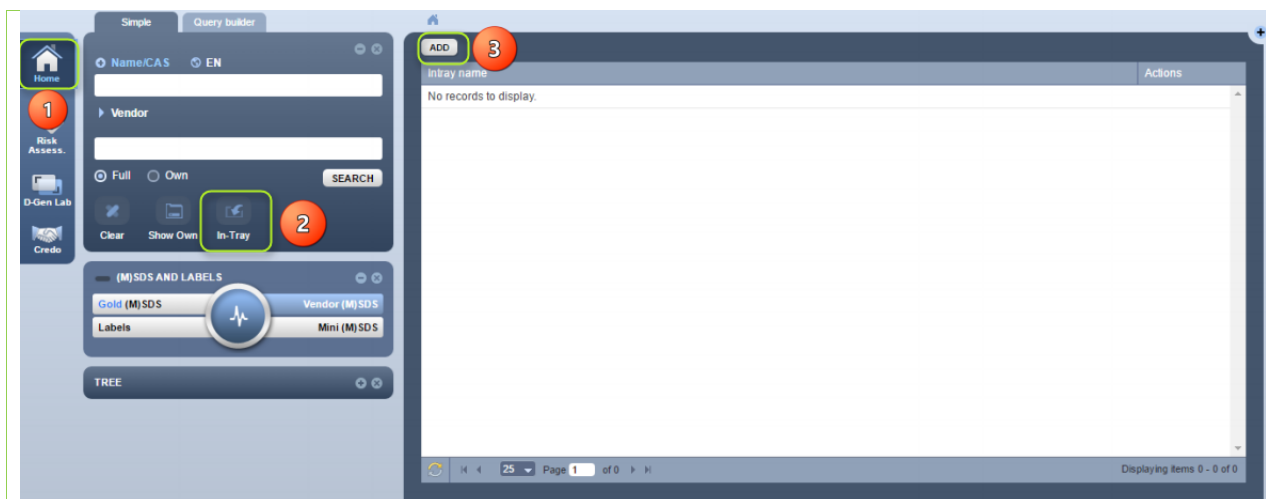
Successfully created an Intray Folder. The next step is to add a material or multiple materials into this Intray folder.

11.2 Adding Materials into an Intray

Activity②	⇨ Choose Materials to Add into Intray folder	
⚠ Materials register shows the names of the materials in folder/store	❻ *click on a folder/store to display a list to choose the material(s) you want to add into the Intray folder* ❼ *select checkbox ☐ alongside each material of interest to add materials into the intray folder* ❽ *mouse right click on material name* ❾ *select "**Add to Intray**" option from the mouse right click panel*	In this example, multiple materials will be added into the intray by using the mouse right click functionality

Image display
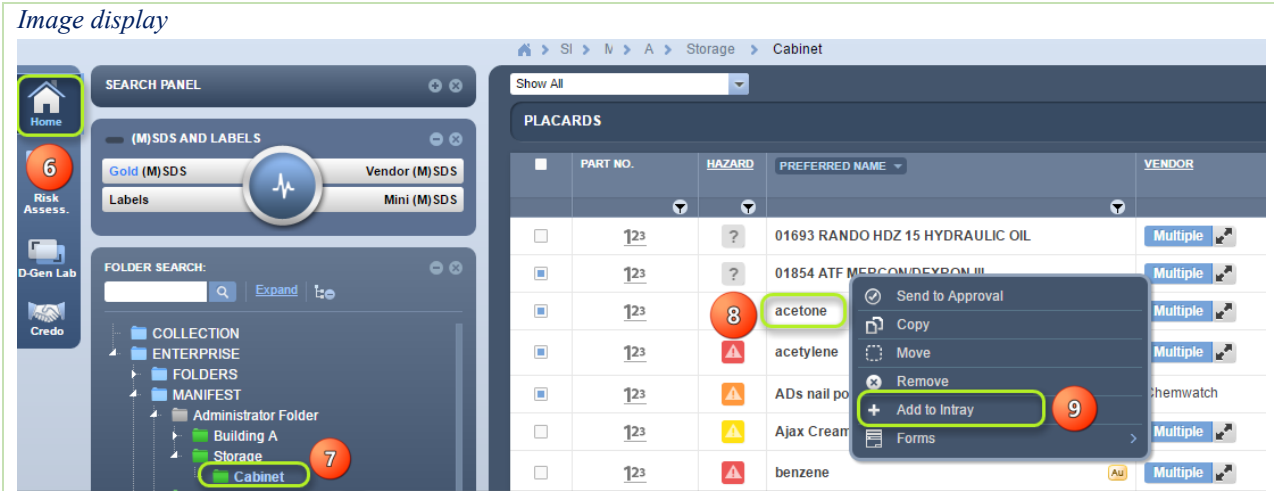
Activity③	⇨ **Add Materials into Intray**

⚠ Intray Panel shows a list of Intray folder(s).	❿ *click the drop down icon* ▾ *from the Add Material panel* ⓫ *select "Intray Folder name* ⓬ *click the add button* ADD *to save input*	Materials Register shows the names of the materials added into it
Image display *[adding materials into Intray folder]*	 *Successfully added materials into an Intray Folder. The next step is to display a specific report from this list of materials. See Activity 4 below.*	

Activity④	⇨ **Open Intray Panel to View Intray Folder List and Display Report**

Image display *[Materials Register shows the names of the materials added into it]*	❶ *Open Intray Panel to View Intray Folder List* ❷ *Click on Intray Folder to View a list of Added Materials* ❸ *Choose the type of report to view (MSDS and Labels Panel* ❹ *Click on the material name to load report, e.g.* **MINI MSDS** *button has selected from the MSDS and Labels Panel.* *[Note that there are 5 types of reports to choose from within the MSDS and Labels Panel]*

Image Display	
[Display an Intray Folder list]	
Image Display	
[Display Materials from an Intray Folder]	
Image Display	
[Display report from an Intray Folder Materials Register]	

11.3 Edit an Intray

Editing an Intray Name

Activity①	⇨ Intray [Edit/Delete already existing Intray name(s)]
Steps to edit/delete intray	❶ *Open Home module* ❷ *Click on Intray button within the Search Panel* ❸ *Click the Edit link* ❹ *Modify text for the Intray name* ❺ *Click the save button to save changes (message display confirmed edition)*
Image display *[Modifying an Intray name]*	

Deleting an Intray

Activity①	⇨ Intray [Edit/Delete already existing Intray name(s)]
Steps to edit/delete intray	❶ *Open Materials/Folders Module* ❷ *Click on Intray button within the Search Panel* ❸ *Select Intray name to display existing register of materials* ❹ *Click on checkbox(es)* ☐ *alongside single or multiple materials to remove from Intray* ❺ *Mouse right click on material name (filtered out as a carcinogen)* ❻ *Select the "Delete from Intray" option task* ❼ *Confirm delete of material(s) by clicking "YES" button*
Image display *[deleted material(s) from an Intray register]*	
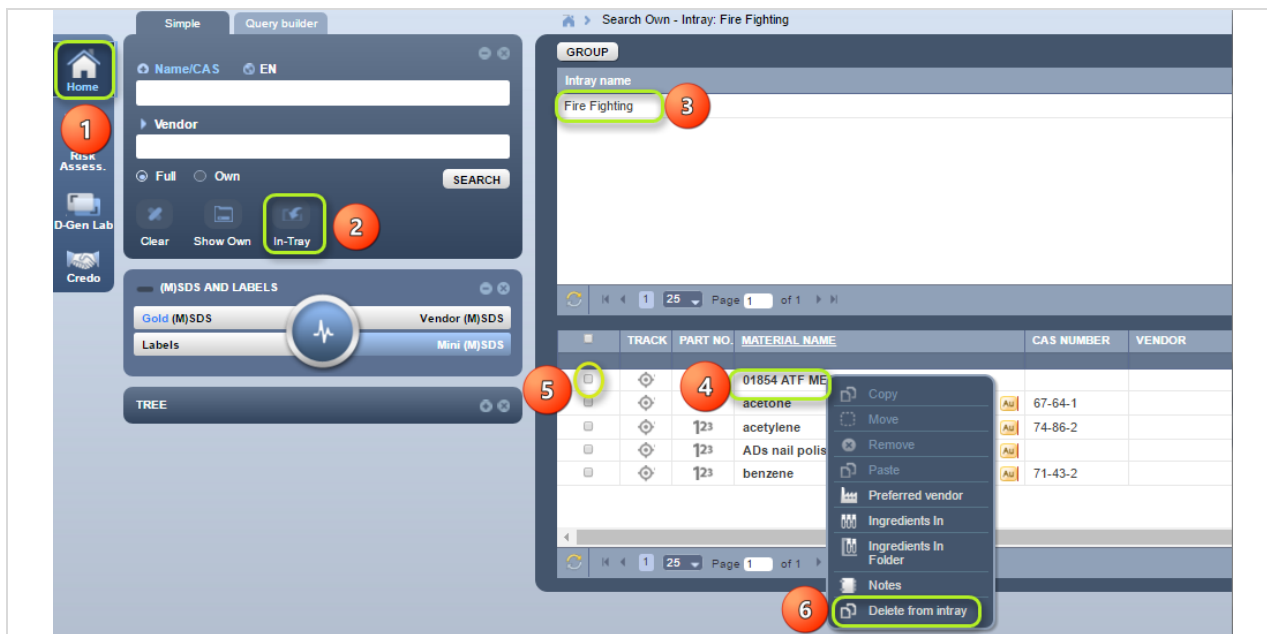
Click "Yes" button to confirm action. A message displays after deleting the material from the intray folder.
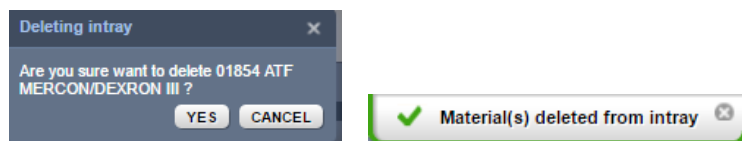
12 Form Builder

Form builder is a powerful database customisation tool for Chemwatch users to create all types of forms for internal and external use within the business or organisation.

> **User Accessibility**
>
> The domain administrator of the GoldFFX program within your business has the arching responsibility to determine which user will be given the right to access Form Builder Settings in order to create or edit forms that will in turn; be used by other users.

In summary, the Form Builder tool provides users with the ability to;

- **Create unlimited data points and associate them with:**
  - Chemicals
  - Folders/Locations
  - Persons
  - Other type of data
- **Corresponding Database fields are created automatically**
- **Populate these fields automatically or manually (using forms)**

All user custom data is stored in a secure, user-specific database and can be used for:

- Searching
- Generating custom reports
- Showing on labels
- Showing on Documents
- Building queries

This tool allows users create and edit forms that may contain any of the following type of fields through various tabs:

- Plain Input Text fields
- Multi-line text fields
- Checkbox fields and menus
- Radio-button fields and menus
- Drop down menus
- Date pickers
- Upload buttons
- Lists
- Even special fields such as "Personnel" and "Contact Details" that automatically populate from your database if contacts are available.

The following steps will guide users on to use the Form Builder Settings

Add Fields
Select the type of fields to add to the form

Fields Settings
Assign labels & conditions for each field

Reorder Forms
Reorder form fields by drag & drop

Publish
Publish the form for user accessibility
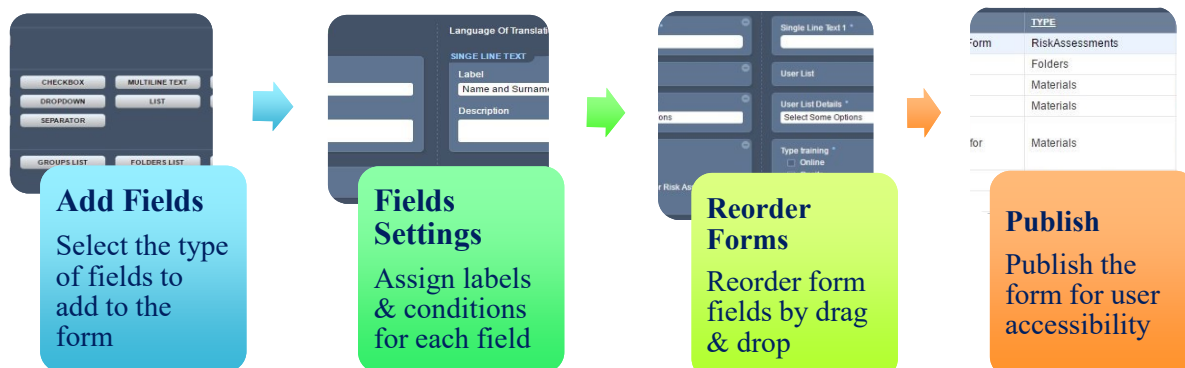
Tabs	Add Field Tab	Form Settings tab	Field Settings Tab	Forms Tab
Elements		Settings, save history and type of datapoint		Name, type and master language
Use		Name the form, save the form's history and assign the type of datapoint to be associated with the form		Create new forms and view existing list of various types of forms. Select a form name to display fields
Datapoints		Materials, folders, users, risk assessment, foldermaterial or container.		

12.1 Create a Form

The form that is illustrated in the steps below is a sample of a business's training records main fields that users can fill to collect trainee's data for a specific training program outcomes. Note that the data can be exported into various types report formats using the report generator tool.

Table: Training record fields

Form Fields	Description
Trainee's name	Full name of trainee
Email	Email address field
Type mode	List of types of training modes
Training checklist	Training categories
Training date	Date of training
Assessment outcome	Training competency

Steps: Create a Form

1. Select the "**Settings link or icon**" Settings ⚙
2. Click on the "**Form Builder**" button 🗎
3. Press the **"Forms"** tab Forms
4. Select **"Create New"** button CREATE NEW
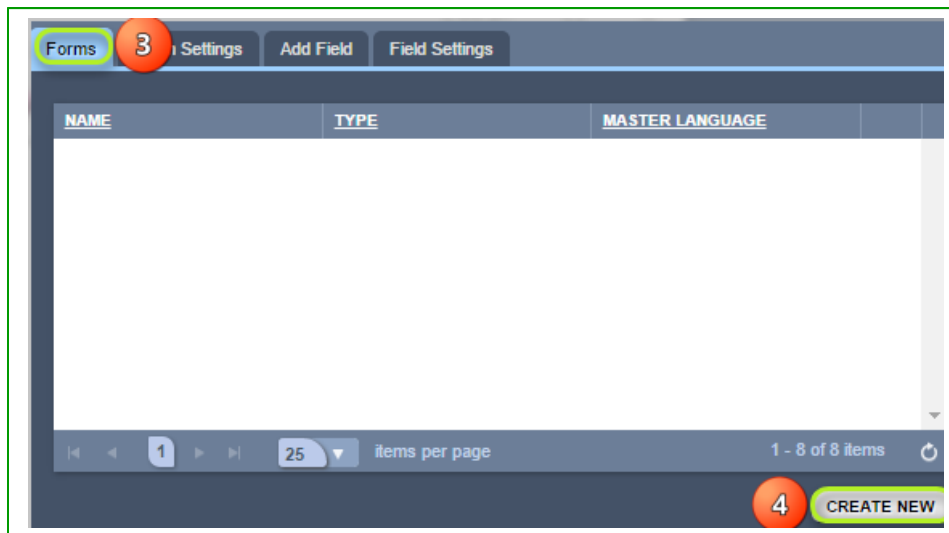
5. Select the **"Forms Settings"** tab Form Settings.

6. Select the "*Settings*" text field and type the name of the form.

7. Click on the **"Save"** history option if applicable.

Figures 87: Assign form settings fields

8. Select the **"drop arrow for the type of datapoints"** to be associated with the program interface element

9. Choose the applicable language for translation from the **"language drop arrow"**. Note that *"English" is the 'master language'* by default.

10. Select the **"Single Line Text 1"** form field

11. Select the **"Add Field"** tab and select **"Single Line Text 1"** field to assign standard field

12. Click on the language *"settings" 'name text field'* for the form

13. Select the **"Single Line Text 1"** form field to assign specific label

Figures 87: Set standard form fields

14. Define a **"Label"** for the select from field. Type the name of the label to assign a label.

15. Enter a **"Description"** of the label

16. **"Assign a Value"** for the label by clicking on the checkbox if the field is required to be filled by user

17. Select **"Create"** button to save form fields
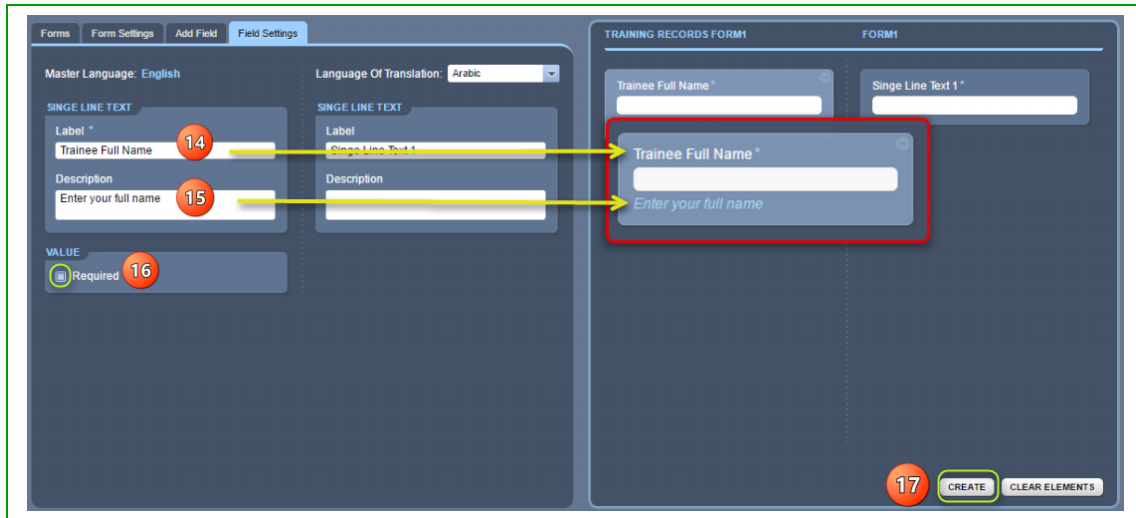
18. Select **"Field Settings"** tab

19. Define a **"Label"** for the selected Email Address form field. Type the name of the label to assign a label.

20. Enter a **"Description"** of the label

21. Select **"Required"** checkbox if applicable

22. Select **"Update"** button

Figures 87: Set standard form fields
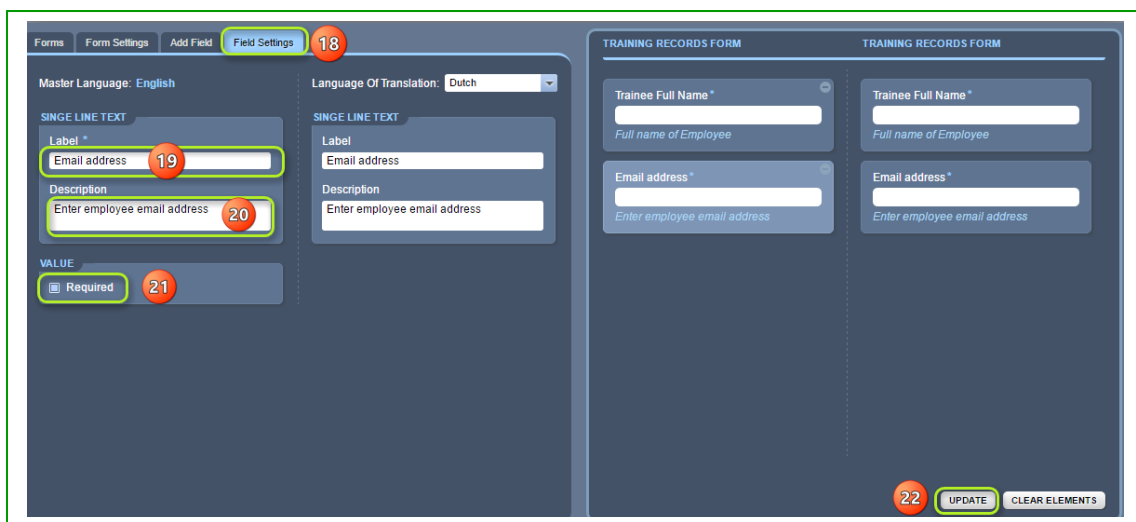
23. Select **"Add Field"** tab

24. Select the **"Radio List"** fancy field button

25. Press the "Radio List" fancy field in the form window

26. Define a **"Label"** for the select Radio List from field. Type the name of the label to assign a label

27. Enter a **"Description"** of the label

28. Add an item to the list by **"typing a radio list item"** for the 'Training Category'

29. Select the **"add** ➕ **icon to add a line item"** for the 'Training Category' and keep adding new line items as per form design

30. Select **"Update"** button

31. Repeat similar steps by adding more form fields as per your form structure (refer to steps 23 to 30)

32. Assign a **"Date Picker"** field into the form for the "Training Date".

33. Once all the required fields have been added into the form, click the **"Back"** button
 to go back to the home module page.
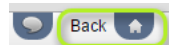
Figures 87: Set standard form fields

How do users fill in the form?

Note that the form is assigned a category for materials. What this form attribute mean is that a user will follow the steps below to fill in the form.

Steps: Filling in a Form

1. Select the "**Home**" module 🏠
2. Select a **folder (store)** 📁 to display a list (register of materials)
3. 🖱 **Mouse right click** on material name

4. Hover mouse pointer to "**Forms**" => Global => Select the appropriate form

5. **Fill in the form**
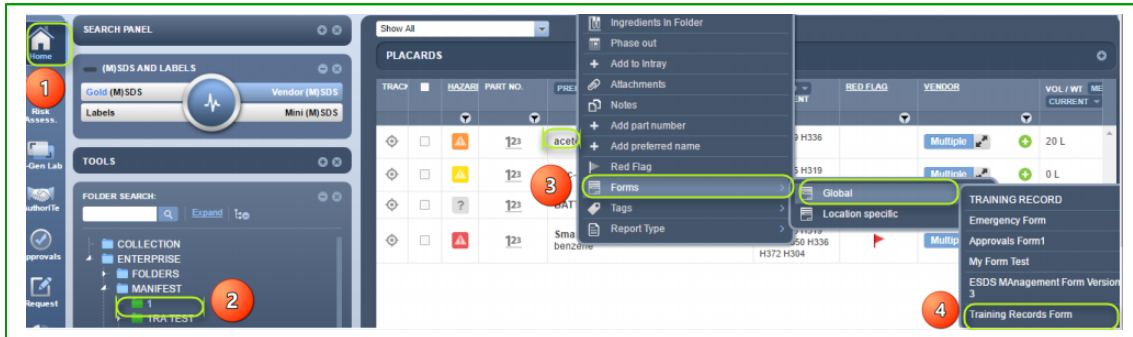
6. Press the **"Submit"** button to save input data in the Form
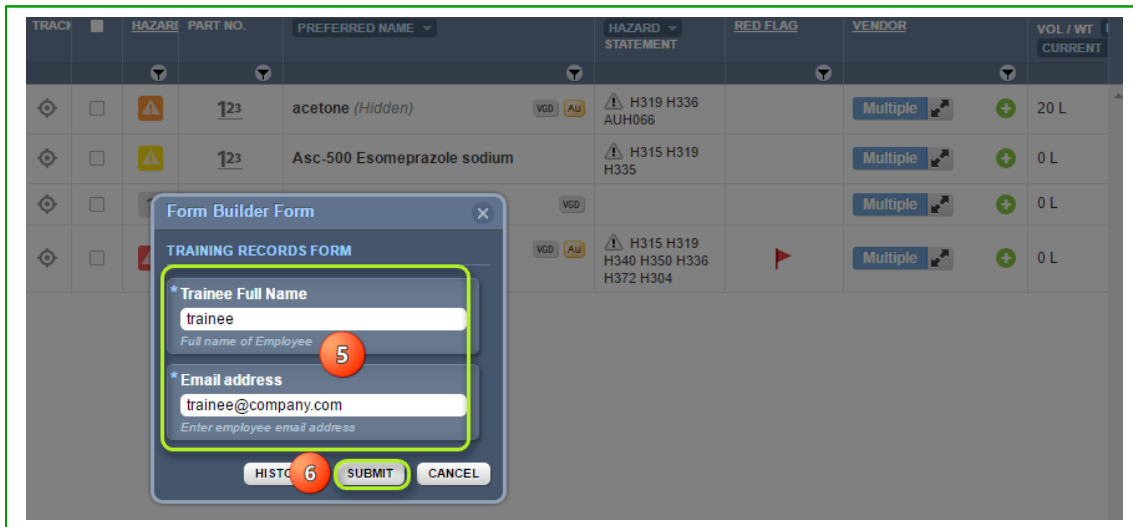
Appendix 1: WHS Regulations Schedule 11

Schedule 11   Placard and manifest quantities

WHS Regulations 347–350, 361, 390 and 391

Table 11.1

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Item	**Description of hazardous chemical**		**Placard quantity**	**Manifest quantity**
1	Flammable gases	Category 1	200L	5000L
2	Gases under pressure	With acute toxicity, categories 1, 2, 3 or 4	50L	500L
3		With skin corrosion categories 1A, 1B or 1C	50L	500L
4		Aerosols	5000L	10 000L
5		Not specified elsewhere in this Table	1000L	10 000L
6	Flammable liquids	Category 1	50L	500L
7		Category 2	250L	2500L
8		Category 3	1000L	10 000L
9		Any combination of chemicals from Items 6 to 8 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000L	10 000L
10		Category 4	10 000L	10 0000L
11	Self-reactive substances	Type A	5kg or 5L	50kg or 50L
12		Type B	50kg or 50L	500kg or 500L
13		Type C to F	250kg or 250L	2500kg or 2500L
14	Flammable solids	Category 1	250kg	2500kg
15		Category 2	1000kg	10 000kg

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Item	Description of hazardous chemical		Placard quantity	Manifest quantity
16		Any combination of chemicals from Items 12 to 15 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
17	Pyrophoric liquids and pyrophoric solids	Category 1	50kg or 50L	500kg or 500L
18	Self-heating substances and mixtures	Category 1	250kg or 250L	2500kg or 2500L
19		Category 2	1000kg or 1000L	10 000kg or 10 000L
20		Any combination of chemicals from Items 17 to 19 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
21	Substances which in contact with water emit flammable gas	Category 1	50kg or 50L	500kg or 500L
22		Category 2	250kg or 250L	2500kg or 2500L
23		Category 3	1000kg or 1000L	10 000kg or 10 000L
24		Any combination of chemicals from Items 21 to 23 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
25	Oxidising liquids and oxidising solids	Category 1	50kg or 50L	500kg or 500L
26		Category 2	250kg or 250L	2500kg or 2500L
27		Category 3	1000kg or 1000L	10 000kg or 10 000L
28		Any combination of chemicals from Items 25 to 27 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
29	Organic peroxides	Type A	5kg or 5L	50kg or 50L
30		Type B	50kg or 50L	500kg or 500L
31		Type C to F	250kg or 250L	2500kg or 2500L

32		Any combination of chemicals from Items 30 and 31 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
33	Acute toxicity	Category 1	50kg or 50L	500kg or 500L
34		Category 2	250kg or 250L	2500kg or 2500L
35		Category 3	1000kg or 1000L	10 000kg or 10 000L
36		Any combination of chemicals from Items 33 to 35 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
37	Skin corrosion	Category 1A	50kg or 50L	500kg or 500L
38		Category 1B	250kg or 250L	2500kg or 2500L
39		Category 1C	1000kg or 1000L	10 000kg or 10 000L
40	Corrosive to metals	Category 1	1000kg or 1000L	10 000kg or 10 000L
41		Any combination of chemicals from Items 37 to 40 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L
42	Unstable explosives		5kg or 5L	50kg or 50L

Notes

1   In item 2, Gases under pressure with acute toxicity, category 4 only applies up to a LC50 of 5000 ppmV. This is equivalent to dangerous goods of Division 2.3.

2   Item 4 includes flammable aerosols.

Appendix 2: Risk Phrases (R-Codes)

Risk Codes and Risk Phrases/Statements

Risk Codes (R-Code)	Risk Phrase or Statement
R20	Harmful by inhalation
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R24	Toxic in contact with skin
R25	Toxic if swallowed
R26	Very toxic by inhalation
R27	Very toxic in contact with skin
R28	Very toxic if swallowed
R29	Contact with water liberates toxic gas
R31	Contact with acids liberates toxic gas
R32	Contact with acids liberates very toxic gas
R33	Danger of cumulative effects
R34	Causes burns
R36	Irritating to eyes
R37	Irritating to respiratory system
R38	Irritating to skin
R39	Danger of very serious irreversible effects
R40	Limited evidence of a carcinogenic effect
R41	Risk of serious eye damage
R42	May cause sensitisation by inhalation
R43	May cause sensitisation by skin contact
R45	May cause cancer
R46	May cause heritable genetic damage
R48	Danger of serious damage to health by prolonged exposure
R49	May cause cancer by inhalation
R60	May impair fertility
R61	May cause harm to the unborn child
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R64	May cause harm to breastfed babies
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness
R68	Possible risk of irreversible effects
R20/21	Harmful by inhalation and in contact with skin
R20/22	Harmful by inhalation and if swallowed
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed

R21/22	Harmful in contact with skin and if swallowed
R23/24	Toxic by inhalation and in contact with skin
R23/25	Toxic by inhalation and if swallowed.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R24/25	Toxic in contact with skin and if swallowed
R26/27	Very toxic by inhalation and in contact with skin
R26/28	Very toxic by inhalation and if swallowed
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed
R27/28	Very toxic in contact with skin and if swallowed
R36/37	Irritating to eyes and respiratory system
R36/38	Irritating to eyes and skin
R36/37/38	Irritating to eyes, respiratory system and skin
R37/38	Irritating to respiratory system and skin
R39/23	Toxic: danger of very serious irreversible effects through inhalation
R39/24	Toxic: danger of very serious irreversible effects in contact with skin
R39/25	Toxic: danger of very serious irreversible effects if swallowed
R39/23/24	Toxic: danger of very serious irreversible effects through inhalation and in contact with skin
R39/23/25	Toxic: danger of very serious irreversible effects through inhalation and if swallowed
R39/24/25	Toxic: danger of very serious irreversible effects in contact with skin and if swallowed
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R39/26	Very toxic: danger of very serious irreversible effects through inhalation
R39/27	Very toxic: danger of very serious irreversible effects in contact with skin
R39/28	Very toxic: danger of very serious irreversible effects if swallowed
R39/26/27	Very toxic: danger of very serious irreversible effects through inhalation and in contact with skin
R39/26/28	Very toxic: danger of very serious irreversible effects through inhalation and if swallowed
R39/27/28	Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed
R39/26/27/28	Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R68/20	Harmful: possible risk of irreversible effects through inhalation
R68/21	Harmful: possible risk of irreversible effects in contact with skin
R68/22	Harmful: possible risk of irreversible effects if swallowed
R68/20/21	Harmful: possible risk of irreversible effects through inhalation and in contact with skin
R68/20/22	Harmful: possible risk of irreversible effects through inhalation and if swallowed
R68/21/22	Harmful: possible risk of irreversible effects in contact with skin and if swallowed

R68/20/21/22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed
R42/43	May cause sensitization by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed
R48/20/21	Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin
R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation
R48/24	Toxic: danger of serious damage to health by prolonged exposure in contact with skin
R48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed
R48/23/24	Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin
R48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R48/23/24/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed

Appendix 3: Structure of an (M)SDS

The Summary of the information contained in the Code of Practice for the Preparation of an (M)SDS is tabled below. *[It is not a comprehensive list of information required on the SDS]*

Section	Headers
1. Product identifier & identity for the chemical	‣ Product Identifier ‣ Other means of identification ‣ Recommended use of the chemical and restrictions on use ‣ Suppliers name, address and phone number ‣ Emergency phone number
2. Hazard Identification	‣ Classification of the hazardous chemical ‣ Label elements, including precautionary statements ‣ Other hazards which do not result in classification
3. Composition/information on ingredients	‣ Identity of chemical ingredients ‣ CAS number and other unique identifiers ‣ Concentration of ingredients
4. First Aid Measures	‣ Description of necessary first aid measures ‣ Symptoms caused by exposure ‣ Medical Attention and Special Treatment
5. Fire Fighting Measures	‣ Suitable extinguishing media ‣ Specific hazards arising from the chemical ‣ Special protective equipment and precautions for fire fighters
6. Accidental release measures	‣ Personal precautions, protective equipment and emergency procedures ‣ Environmental precautions ‣ Methods and materials for containment and cleaning up
7. Handling and Storage	‣ Precautions for safe handling ‣ Conditions for safe storage, including any incompatibilities
8. Exposure controls/personal protection	‣ Control parameters – exposure standards, biological monitoring ‣ Appropriate engineering controls ‣ Personal protective equipment (PPE)
9. Physical and chemical properties	‣ Appearance ‣ Odour ‣ Odour threshold ‣ pH ‣ Melting point/freezing point ‣ Boiling point and boiling range ‣ Flash point ‣ Evaporation rate ‣ Flammability

	▸ Upper/lower flammability or explosive limits
	▸ Vapour pressure
	▸ Vapour density
	▸ Relative density
	▸ Solubility
	▸ Partition coefficient: n-octanol/water
	▸ Auto-ignition temperature
	▸ Decomposition temperature
	▸ Viscosity
	▸ Specific heat value
	▸ Particle size
	▸ Volatile organic compounds content
	▸ % volatile
	▸ Saturated vapour concentration
	▸ Release of invisible flammable vapours and gases
Additional parameters	▸ Shape and aspect ratio
	▸ Crystallinity
	▸ Dustiness
	▸ Surface area
	▸ Degree of aggregation or agglomeration
	▸ Ionisation (redox potential)
	▸ Biodurability or biopersistence
10. Stability and Reactivity	▸ Reactivity
	▸ Chemical stability
	▸ Conditions to avoid
	▸ Incompatible materials and possible hazardous reactions
	▸ Hazardous decomposition products
11. Toxicological information	▸ Information on routes of exposure
	▸ Symptoms related to exposure
	▸ Numerical measures of toxicity
	▸ Immediate, delayed and chronic health effects from exposure
	▸ Exposure Levels
	▸ Interactive effects
	▸ Data limitations
12. Ecological information	▸ Ecotoxicity
	▸ Persistence and degradability
	▸ Bioaccumulative potential
	▸ Mobility in soil
	▸ Other adverse effects
13. Disposal considerations	▸ Safe handling and disposal methods
	▸ Disposal of any contaminated packaging
	▸ Environmental regulations

14. Transport information	▸ UN number
	▸ Proper shipping name
	▸ Transport hazard class(es)
	▸ Packing group
	▸ Environmental hazards
	▸ Special precautions during transport
	▸ Hazchem Code
15. Regulatory information	▸ Safety, health and environmental regulations specific for the product in question
	▸ Poisons Schedule number
16. Other information	▸ Date of preparation or review
	▸ Key abbreviations or acronyms used

Appendix 5: GHS Pictograms and DG Diamonds

The nine hazard pictograms represent physical, health and/or environmental hazards. Chronic health hazards include carcinogens, reproductive toxins, mutagens, specific target organ toxicants, and aspiration toxicants. Below is a comparison table between the WHS hazard pictograms and the ADG diamonds.

Hazard pictograms and ADG

Hazard Pictograms	GHS Hazard	Dangerous Goods class labels (pictograms)	Dangerous goods classes
Exploding bomb	Explosives Self-reactive Organic peroxides	EXPLOSIVE ** 1 ; 1.4 EXPLOSIVE * 1 ; 1.5 EXPLOSIVE D 1 ; 1.6 EXPLOSIVE N 1	Explosive
Flame	flammables Self-reactives Pyrophorics Self-heating Emits flammable gas in contact with water Organic peroxides	FLAMMABLE LIQUID 3 ; FLAMMABLE SOLID 4 ; SPONTANEOUSLY COMBUSTIBLE 4 ; DANGEROUS WHEN WET 4 ; FLAMMABLE GAS 2 ; ORGANIC PEROXIDE 5.2	Flammability (Liquid, Solid or Gas) Pyrophoric, Emits Flammable Gas Organic Peroxide
Flame over circle	Oxidisers	OXIDIZING AGENT 5.1 ; OXIDIZING GAS 2	Oxidiser Oxidising gas
Gas Cylinder	Gases under pressure	NON-FLAMMABLE NON-TOXIC GAS 2 ; FLAMMABLE GAS 2 ; OXIDIZING GAS 2 ; TOXIC GAS 2	Non-toxic non-flammable gas, flammable gas, oxidising gas, toxic gas
Skull and crossbones	Acute toxicity	TOXIC GAS 2 ; TOXIC 6	Acute toxicity Acute Toxic gas

Exclamation mark	Acute toxicity Skin irritants Eye irritants Skin sensitisers	No equivalent	
Health hazard	Carcinogens Respiratory sensitisers Reproductive toxicants Target organ toxicants Germ cell mutagens	No equivalent	
Corrosion	Eye corrosion Skin corrosion Corrosive to metal	CORROSIVE 8	Corrosive to metals
Environment	Aquatic toxicity. Not covered within the scope of workplace hazardous chemicals requirements		Environmental hazard
No equivalent hazard pictogram		MISCELLANEOUS DANGEROUS GOODS 9	Miscellaneous dangerous goods
Not covered within the scope of workplace hazardous chemicals requirements		INFECTIOUS SUBSTANCE 6	Infectious
Not covered within the scope of workplace hazardous chemicals requirements		RADIOACTIVE I CONTENTS ACTIVITY 7	Radioactive

Appendix 6: GoldFFX User Interface Elements and Uses

The table below provides a list of common user interface elements and use.

Table: User Interface Element Description and Use

Element	Feature	Description	Use
	Home module	Access to modular features and tools	Search panel, (M)SDS and Labels panel, Tools panel, Folder panel, View Material Register, Hazards Filtering Tool, Report Generator, Print Save Email reports,
	Live help	Access to chat panel	Chat panel enables users to request for support online using live text messaging
	Settings	Administrative Settings	Enables the administrator of the program to set up the system and create users, roles, permissions and privileges. Not all users may have access to Settings.
English	Language	User Interface Language	Enables users to change the user interface language
A-Z	Glossary	Library	Enables users to search for specific words, terms with descriptions or definitions
	Elearning	Elearning packages	Access to online elearning materials
	Bulletin	Bulleting Report	Short global report about what is happening in the chemical word
	Help and support	Knowledgebase, Ticketing System	Access to the knowledgebase, frequently asked questions and ticketing system. Users can submit a ticket (issue) from the help inquiry ticketing form.
	Manual	User Guide	Download the manual or user guide
REPORT GENERATOR	Report Generator	Export data	Export data into various formats
?	Reference help	Reference help guide	Quick search for reference guides on how to use the application
	Logout Link	Logout/User Login	Provide the domain and user login names and log out link

Appendix 7: Hazard Graphics (EU)

The following symbols are indications of risks and danger used. These are derived from the Dangerous Substances Directive (EU)/Dangerous Preparations Directive (EU) [DSD/DPD]. The Gold MSDS, Mini SDS, Labels, Manifest hazard label, all display respective graphics as per the classification of the substance.

Table: Hazards based on DSD/DPD

PHYSICAL HAZARDS			
Explosive		**Oxidising**	
Symbol and indication of danger	*E-Explosives*	Symbol and indication of danger	*O-Oxidising*
Risk phrase(s)	**R2** Risk of explosion by shock, friction, fire or other sources of ignition. **R3** Extreme risk of explosion by shock, friction, fire or other sources of ignition.	Risk phrase(s)	**R7** May cause fire. **R8** Contact with combustible material may cause fire. **R9** Explosive when mixed with combustible material.
Extremely Flammable		**Highly Flammable**	
Symbol and indication of danger	*F+ - Extremely Flammable*	Symbol and indication of danger	*F – Highly Flammable*
Risk phrase(s)	**R12** Extremely flammable.	Risk phrase(s)	**R11** Highly flammable. **R15** Contact with water liberates extremely flammable gases. **R17** Spontaneously flammable in air.

Flammable		1. Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.
Symbol and indication of danger	No Symbol or indication *Flammable*	
Risk phrase(s)	**R10** Flammable.	
		2. Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.
Notes: These symbols will be displayed in the Gold MSDS where applicable		Section 2: Label Elements where applicable
These symbols will be displayed in the Mini MSDS where applicable		Section on "Safe Storage with Other Classified Chemicals"
These symbols will be displayed in the Manifest Hazard Summary icons where applicable.		Chemwatch Hazard Ratings panel

HEALTH HAZARDS		

Harmful		Corrosive	
Symbol and indication of danger	*Xn – Harmful*	**Symbol and indication of danger**	*C - Corrosive*
Risk Codes	R20 R21 R22, R20/21 R20/22 R21/22 R20/21/22 R48/20 R48/21 R48/22 R40/20/21 R48/20/22 R48/20/21/22 R68/20 R68/21 R68/22 R68/20/22 R68/21/22 R68/20/21/22 R65	**Risk phrase(s)**	**R34** Causes burns. **R35** Causes severe burns.

Irritant		
Symbol and indication of danger	*Xi – Irritant*	1. Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.
Risk phrase(s)	**R36** Irritating to eyes. **R37** Irritating to respiratory system. **R38** Irritating to skin. **R36/37** Irritating to eyes and respiratory system. **R36/38** Irritating to eyes and skin. **R37/38** Irritating to respiratory system and skin. **R36/37/38** Irritating to eyes, respiratory system and skin. **R41** Risk of serious damage to eyes.	2. Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

Notes:	
These symbols will be displayed in the Gold MSDS where applicable	Section 2: Label Elements where applicable
These symbols will be displayed in the Mini MSDS	Section on "Safe Storage with Other Classified

where applicable	Chemicals"
These symbols will be displayed in the Manifest Hazard Summary icons where applicable.	Section on "Chemwatch Hazard Ratings" panel

HEALTH HAZARDS	

Sensitising	

Sensitising		Sensitising	
Symbol and indication of danger	*Xn – Harmful*	**Symbol and indication of danger**	*Xi –Irritant*
Risk phrase(s)	**R42** May cause sensitisation by inhalation.**R42/43** May cause sensitisation by inhalation and skin contact.	**Risk phrase(s)**	**R43** May cause sensitisation by skin contact.

Carcinogenic		

	Category 1	Category 2	Category 3
Symbol and indication of danger	*T- Toxic*	*T- Toxic*	*Xn – Harmful*
Risk phrase(s)	**R45** May cause cancer. **R49** May cause cancer by inhalation	**R45** May cause cancer. **R49** May cause cancer by inhalation	**R40** Limited evidence of a carcinogenic effect.

Mutagenic		
	Category 1	Category 2	Category 3
Symbol and indication of danger	*T- Toxic*	*T- Toxic*	*Xn – Harmful*
Risk phrase(s)	**R46** May cause heritable genetic damage.	**R46** May cause heritable genetic damage.	**R68** Possible risk of irreversible effects.

Toxic for Reproduction		
	Category 1	Category 2	Category 3
Symbol and indication of danger	*T- Toxic*	*T- Toxic*	*Xn – Harmful*
Risk phrase(s)	**R60** May impair fertility. **R61** May cause harm to the unborn child.	**R60** May impair fertility. **R61** May cause harm to the unborn child.	**R62** Possible risk of impaired fertility. **R63** Possible risk of harm to the unborn child.

ENVIRONMENTAL HAZARDS

	N- Dangerous for the Environment	
Symbol and indication of danger	 *Environment*	No symbol or indication
Risk phrase(s)	**R50** Very toxic to aquatic organisms. **R50-53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R51-53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **R54** Toxic to flora. **R55** Toxic to fauna. **R56** Toxic to soil organisms. **R57** Toxic to bees. **R58** May cause long-term adverse effects in the environment. **R59** Dangerous for the ozone layer.	**R52** Harmful to aquatic organisms. **R53** May cause long-term adverse effects in the aquatic environment. **R52-53** Harmful to aquatic organisms, may cause long-term adverse

Appendix 8: NFPA Diamonds

NFPA 704 diamond

NFPA Diamonds and Colour Coding

The four divisions are typically color-coded, with blue indicating level of health hazard, red indicating, flammability, yellow (chemical) reactivity, and white containing special codes for unique hazards. Each of health, flammability and reactivity is rated on a scale from 0 (no hazard) to 4 (severe risk). For more information, visit http://www.nfpa.org/.

Section 2 of Gold MSDS will depict the applicable NFPA diamond where applicable. Note that, the MSDS Settings panel will have to be checked/marked for this diamond or graphic to show in the MSDS.

	Health (Blue)		Flammability (Red)
0	Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials (e.g., water)	0	Materials that will not burn under typical fire conditions (e.g., carbon dioxide), including intrinsically noncombustible materials such as concrete, stone and sand. (Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes.)
1	Exposure would cause irritation with only minor residual injury (e.g., acetone)	1	Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur (e.g., mineral oil). Includes some finely divided suspended solids that do not require heating before ignition can occur. (Flash point at or above 93.4°C (200°F)
2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g., diethyl ether)	2	Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur (e.g., diesel fuel) and some finely divided suspended solids that do not require heating before ignition can occur. Flash point between 38°C (100°F) and 93°C (200°F)
3	Short exposure could cause serious temporary or moderate residual injury (e.g.,chlorine)	3	Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions (e.g., gasoline). Liquids having a flash point

4	Very short exposure could cause death or major residual injury (e.g., hydrogen cyanide, phosphine, carbon monoxide, sarin)	**4**	below 23°C (73°F) and having a boiling point at or above 38°C (100°F) or having a flash point between 23°C (73°F) and 38°C (100°F) Will rapidly or completely vaporize at normal atmospheric pressure and temperature, or is readily dispersed in air and will burn readily (e.g., acetylene, diethylzinc). Includes pyrophoric substances. Flash point below 23°C (73°F)
	Special (White)		**Instability/Reactivity (Yellow)**
	The white "special notice" area can contain several symbols. The following symbols are defined by the NFPA 704 standard.	**0**	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium)
OX	Oxidizer (e.g., potassium perchlorate, ammonium nitrate, hydrogen peroxide)	**1**	Normally stable, but can become unstable at elevated temperatures and pressures (e.g. propene)
W	Reacts with water in an unusual or dangerous manner (e.g., cesium, sodium, sulfuric acid)	**2**	Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g., white phosphorus, potassium, sodium)
SA	Simple asphyxiant gas. Specifically limited to the following gases: nitrogen, helium, neon, argon, krypton and xenon.[2]	**3**	Capable of detonation or explosive decomposition but requires a strong initiating source, must be heated under confinement before initiation, reacts explosively with water, or will detonate if severely shocked (e.g. ammonium nitrate, chlorine trifluoride)
		4	Readily capable of detonation or explosive decomposition at normal temperatures and pressures (e.g., nitroglycerin, chlorine azide, chlorine dioxide)

Appendix 9: Hazard Categories in GHS Classification and Pictograms

HAZARD CLASS	EXPLOSIVES		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
Unstable Explosive	DANGER	H200 **Unstable Explosive**	Exploding Bomb
Division 1.1		H201 **Explosive; mass explosion hazard**	
Division 1.2		H202 **Explosive; severe projection hazard**	
Division 1.3		H203 **Explosive; fire, blast or projection hazard**	
Division 1.4	WARNING	H204 **Fire or projection hazard**	
Division 1.5	**DANGER**	H205 **May mass explode in fire** *THE SYMBOL IS ACCORDING TO THE ADG CODE FOR THE TRANSPORT OF DANGEROUS GOODS*	**1.5 EXPLOSIVE**
Division 1.6	**NO SIGNAL WORD**	**No hazard statement** *THE SYMBOL IS ACCORDING TO THE ADG CODE FOR THE TRANSPORT OF DANGEROUS GOODS*	**1.6 EXPLOSIVE**
HAZARD CLASS	**FLAMMABLE GASES**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H220 **Extremely flammable gas**	Flame
HAZARD CLASS	**FLAMMABLE AEROSOLS**		
1	**DANGER**	H222 **Extremely flammable aerosol**	Flame
2	**WARNING**	H223 **Flammable aerosol**	
HAZARD CLASS	**OXIDISING GASES**		
1	**DANGER**	H270 **May cause or intensify fire; oxidiser**	Flame over circle
HAZARD CLASS	**GASES UNDER PRESSURE**		
Compressed Gas	**WARING**	H280 **Contains gas under pressure; may explode if heated**	Gas Cylinder
Liquefied Gas		H280 **Contains gas under pressure; may explode if heated**	

Dissolved Gas		H280 **Contains gas under pressure; may explode if heated**	
Refrigerated liquefied gas		H281 **Contains refrigerated gas; may cause cryogenic burns or injury**	
HAZARD CLASS	**FLAMMABLE LIQUIDS**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H224 **Extremely flammable liquid and vapour**	Flame
2	**DANGER**	H225 **Highly flammable liquid and vapour**	
3	**WARNING**	H226 **Flammable liquid and vapour**	
4	**WARNING**	H227 **Combustible liquid**	No Symbol
HAZARD CLASS	**FLAMMABLE SOLIDS**		
1	**DANGER**	H228 **Flammable solid**	Flame
2	**WARNING**	H228 **Flammable solid**	
HAZARD CLASS	**SELF –REACTIVE SUBSTANCES AND MIXTURES**		
Type A	**DANGER**	H240 **Heating may cause an explosion**	Exploding Bomb
Type B	**DANGER**	H241 **Heating may cause a fire or explosion**	Exploding Bomb and Flame
Type C	**DANGER**	H242 **Heating may cause a fire**	Flame
Type D		H242 **Heating may cause a fire**	
Type E	**WARNING**	H242 **Heating may cause a fire**	
Type F	**WARNING**	H242 **Heating may cause a fire**	
Type G		⚠️ *HAZARD CATEGORY TYPE G: THERE ARE NO LABEL ELEMENTS ALLOCATED TO THIS HAZARD CATEGORY*	No Symbol
HAZARD CLASS	**PYROPHORIC LIQUIDS**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H250 **Catches fire spontaneously if exposed to air**	Flame
HAZARD CLASS	**PYROPHORIC SOLIDS**		

1	**DANGER**	H250 **Catches fire spontaneously if exposed to air**	Flame
HAZARD CLASS	**SELF-HEATING SUBTSANCES AND MIXTURES**		
1	**DANGER**	H251 **Self-heating; may catch fire**	Flame
2	**WARNING**	H252 **Self-heating in large quantities; may catch fire**	
HAZARD CLASS	**ORGANIC PEROXIDES**		
Type A	**DANGER**	H240 **Heating may cause a fire or explosion**	Exploding Bomb
Type B	**DANGER**	H241 **Heating may cause a fire or explosion**	Exploding Bomb and Flame
Type C	**DANGER**	H242 **Heating may cause a fire**	Flame
Type D	**DANGER**	H242 **Heating may cause a fire**	
Type E	**WARNING**	H242 **Heating may cause a fire**	
Type F	**WARNING**	H242 **Heating may cause a fire**	
HAZARD CLASS	**CORROSIVE TO METALS**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**WARNING**	H290 **May be corrosive to metals**	Corrosion
HAZARD CLASS	**ACUTE TOXICITY-ORAL**		
1	**DANGER**	H300 **Fatal if swallowed**	Skull and crossbones
2	**DANGER**	H300 **Fatal if swallowed**	
3	**DANGER**	H301 **Toxic if swallowed**	
4	**WARNING**	H302 **Harmful if swallowed**	Exclamation mark
HAZARD CLASS	**ACUTE TOXICITY- DERMAL**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H310 **Fatal in contact with skin**	Skull and Crossbones

2	**DANGER**	H310 **Fatal in contact with skin**	
3	**DANGER**	H311 **Toxic in contact with skin**	
4	**WARNING**	H312 **Harmful in contact with skin**	Exclamation mark
HAZARD CLASS	**ACUTE TOXICITY- INHALATION**		
1	**DANGER**	H330 **Fatal if inhaled**	Skull and Crossbones
2	**DANGER**	H330 **Fatal if inhaled**	
3	**DANGER**	H331 **Toxic if inhaled**	
4	**WARNING**	H332 **Harmful if inhaled**	Exclamation mark
HAZARD CLASS	**ACUTE TOXICITY- INHALATION**		
1A to 1C	**DANGER**	H314 **Causes severe skin burns and eye damage**	Corrosion
2	**WARNING**	H315 **Causes skin irritation**	Exclamation mark
HAZARD CLASS	**SERIOUS EYE DAMAGE/IRRITATION**		
1	**DANGER**	H318 **Causes serious eye damage**	Corrosion
2A	**WARNING**	H319 **Causes serious eye irritation**	Exclamation mark
HAZARD CLASS	**SENSITISATION - RESPIRATORY**		
1, 1A, 1B	**DANGER**	H334 **May cause allergy or asthma symptoms or**	Health Hazard

		breathing difficulties if inhaled	
HAZARD CLASS	**SENSITISATION - SKIN**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1, 1A, 1B	**WARNING**	H317 **May cause an allergic skin reaction**	Exclamation mark
HAZARD CLASS	**GERM CELL MUTAGENICITY**		
1A, 1B	**DANGER**	H340 **May cause genetic defects** <...> <...> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	Health Hazard
2	**WARNING**	H341 **Suspected of causing genetic defects** <...>	
HAZARD CLASS	**CARCINOGENICITY**		
1A, 1B	**DANGER**	H350 **May cause cancer** <...> <...> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	Health Hazard
2	**WARNING**	H351 **Suspected of causing cancer** <...>	
HAZARD CLASS	**TOXIC TO REPRODUCTION (effects on or via lactation)**		
1A, 1B	**DANGER**	H360 **May damage fertility or the unborn child** <...> <<...>> <...> *(state specific effect if known)* <<...>> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	Health Hazard
2	**WARNING**	H361 **Suspected of damaging fertility or the unborn child** <...> <<...>>	
(additional)	No Signal Word	H362 **May cause harm to breast-fed children**	No Symbol
HAZARD CLASS	**SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H370 Causes **damage to organs** <...> <<...>> <...> *(or state all organs affected if known)* <<...>> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the*	Health Hazard

		hazard)	
2	**WARNING**	H371 **May cause damage to organs** <...> <<...>> ⚠ <...> *(or state all organs affected, if known)* <<...>> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	
3	**WARNING**	H335 **May cause respiratory irritation;** or H336 **May cause drowsiness or dizziness**	Exclamation mark ❗

HAZARD CLASS	**SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H372 **Causes damage to organs** <...> **through prolonged or repeated exposure** <<...>> ⚠ <...> *(state all organs affected, if known)* <<...>> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	Health Hazard
2	**WARNING**	H373 **May cause damage to organs** <...> **through prolonged or repeated exposure** <<...>> ⚠ <...> *(state all organs affected, if known)* <<...>> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	

HAZARD CLASS	**SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)**		
HAZARD CATEGORY	**SIGNAL WORD**	**HAZARD STATEMENT**	**TYPE OF SYMBOL**
1	**DANGER**	H304 **May be fatal if swallowed and enters airways**	Health Hazard

Appendix 10: Guide to Classification Codes and Hazchem Brochure

Please click on the link below or select the image to download the "Guide to Classification; conversion of Risk Codes to Hazards Codes

http://jr.chemwatch.net/manuals/Wall%20Chart.pdf

Please select the picture to download the Hazchem brochure for reference.

http://jr.chemwatch.net/manuals/Hazchem_Brochure.pdf

Appendix 11: Dangerous Goods Classes and Diamonds

 Dangerous Goods can be identified as substances which when stored or transported in bulk present a hazard from explosion, fire, poisoning or corrosion on short term exposure. As stated in the National Occupational Health and Safety Commission's (NOHSC) Guidance Notes, "Dangerous Goods may also be referred to as subsets of hazardous materials". The NOHSC publications for hazardous substances also apply to all the substances under *the Australian Code for the Transport of Dangerous Goods by Road and Rail* (ADG Code 7) and substances that meet the classification criteria of the Code. The Chemwatch system provides information about the relevant diamond classes required for Placarding as well as the related subsidiary risks and packaging groups in accordance to placarding threshold quantities. For more information, go to http://www.ntc.gov.au

Dangerous Goods Class Labels

All dangerous goods are assigned ***class labels (diamonds)*** to assist identification and denote the hazard class of a particular substance. Class labels are represented by a diamond shaped warning sign and description of the principal hazard. Example: Class 2.1 Flammable Gas, Class 4.1 Flammable Solid. The table for provides DG Classes, DG Diamonds and their respective description. Section 2 of the MSDS will show Hazchem labels.

Dangerous Goods

DG Diamonds	DG Class	Description	Definition
	Class 1.1 (DGC 1.1)	A substance which is able to exert a mass explosion hazard whereby the entire load is affected.	Explosive substances can form an explosive atmosphere of gas, vapour or dust.

The class also includes substances and articles produced for an explosive or pyrotechnic effect. |
| | Class 1.2 (DGC 1.2) | A substances or article with a projection hazard but not a mass explosion hazard. | |
| | Class 1.3 (DGC 1.3) | These substances and articles can produce quantities of radiant heat or burn one another causing either a minor blast or a minor projection hazard or both, but not a mass explosion. | |

	Class 1.4 (DGC 1.4)	Small hazards are presented by these substances, in the event of ignition or initiation during transport. Effects are confined to the package, no projection of fragments of appreciable size or range is expected. External fire should not cause instantaneous explosion of the total load.	
	Class 1.5 (DGC 1.5)	Extremely explosive and sensitive substances able to induce a mass explosion hazard.	
	Class 1.6 (DGC 1.6)	This class contains extremely insensitive detonating substances that demonstrate a negligible probability of exploding.	
Dangerous Goods **Class 2: Gases**			
	Class 2.1 Flammable Gases (DGC 2.1)	Flammable gases are gases that can ignite in air if the flammable/vapour concentration lies within certain limits. These limits are identified as the upper and lower flammable or explosive limits. The flammable range is the flammable vapour/air concentration, which falls between these limits. The flammable or explosive limits are expressed as the percentage of a particular vapour in air. The vapour/air density is usually greater than one, therefore many flammable gases will settle in low areas. Examples: propane, butane, ethylene, acetylene and Liquid Petroleum Gas.	Exhibit a vapour pressure greater than 300kPa at 50 degrees Celsius. Completely gaseous at 20 degrees at Standard Temperature and Pressure (STP). Subdivision during transport is required and it is determined by the primary hazard of the gas.
	Class 2.2 Non Flammable Non Toxic Gases (DGC 2.2)	Class 2.2 gases are not flammable when exposed to an ignition source, nor are they toxic. Non-flammable and non-toxic gases are asphyxiants, diluting or replacing the oxygen content in the atmosphere.	
	Class 2.3 Toxic Gases (DGC 2.3)	Class 2.3 gases are very toxic or corrosive to humans, so they may pose a health hazard. Inhalation may cause death or seriously damage human health. Lingering and irritating odours often identify some	

		but not all toxic gases. Breathing apparatus must also be provided in areas where toxic gases are stored or transported. Examples include: ammonia and sulphur dioxide.	
Dangerous Goods **Class 3: Flammable Liquid**			
	Class 3 Flammable Liquid (DGC 3)	**Class 3 is divided into Packing groups as follows:** **Class 3 Packing Group I** Boiling Point <=35°C. **Class 3 Packing Group II** Flash Point<= 23°C, Boiling Point > 35°C. **Class 3 Packing Group III** Flash Point > 23°C to <=61°C, Boiling Point > 35°C. **Combustible Liquids** are less flammable (higher flash point), but when stored in very large quantity or with other flammable liquids, they pose an increased hazard. Examples include acetone, benzene, petrol	Liquids that can generate a vapour, forming a flammable mixture with air. The flash point is the lowest temperature at which a liquid generates vapour which will remain alight when a flame is applied.
Dangerous Goods **Class 4: Flammable Solids**			
	Class 4.1 Flammable Solids (DGC 4.1)	Combust readily in the presence of external ignition sources like sparks and flames. Examples: red phosphorus, picric acid, hexamine, sulphur and naphthalene	Solid substances which are flammable in air and can sustain spontaneous combustion and emit flammable gases upon contact with water.
	Class 4.2 Substances liable to spontaneous combustion (DGC 4.2)	Class 4.2 solids are able to heat up and catch fire spontaneously without any influence from external ignition sources. Examples: Activated Carbon and White Phosphorus	Ability to; spontaneously combust
	Class 4.3 Substances in contact with water emit flammable	Spontaneous ignition may occur as heat is liberated when the substance is in contact with water, producing flammable gases in dangerous quantities. Examples: sodium and calcium carbide.	Ability to; spontaneously ignite when in contact with water.

	gases (DGC 4.3)		
Dangerous Goods Class 5: Oxidising Agents			
	Class 5.1 Oxidising Substances (DGC 5.1)	Oxygen is generally provided in a reactive form or is liberated to cause an oxidation process. High reactivity may lead to explosion or fire if in contact with combustible materials. Examples: Hydrogen peroxide and ammonium nitrate.	Contribute to the combustion of other materials.
	Class 5.2 Organic Peroxides (DGC 5.2)	Substances with the ability to undergo exothermic self-accelerating decomposition as the substance contains its own oxygen in the chemical structure. Decomposition of organic peroxides can lead to flammable and toxic gases being generated. Many organic peroxides also burn rapidly and are very sensitive to impact or friction. Examples: dibenzoyl peroxide and methyl ethyl ketone peroxide.	Thermally unstable substances.
Dangerous Goods Class 6: Toxic and Infectious Substances			
	Class 6.1 Toxic Substances (DGC 6.1)	These substances have the common nature of being able to cause death or serious injury if inhaled or in contact with the skin. Examples: Calcium cyanide and lead arsenate.	Cause death or serious injury and are also classified as hazardous chemicals.
	Class 6.2 Infectious Substances (DGC 6.2)	They are incorporated in the Australian Dangerous Goods Code if they are capable of spreading disease upon exposure. Stringent clothing and personal protective equipment controls are required when handling or in contact with these substances.	Substances containing disease yielding organisms and are not subject to the regulations of the Australian Dangerous Goods Code.

Dangerous Goods **Class 7: Radioactive Substances**			
	Class 7 Radioactive Substances (DGC 7)	This class includes materials or combinations of these that can emit radiation spontaneously. Example: Uranium.	Spontaneous radiation due to the radioactive nature of the substance.

Dangerous Goods **Class 8: Corrosive Substances**			
	Class 8 Corrosive Substances (DGC 8)	Substances that may cause severe burns by chemical action when in contact with living tissue. Examples: Hydrochloric acid, nitric acid and sulfuric acid.	Ability to; damage or destroy goods and materials or cause other hazards.

Dangerous Goods **Class 9: Miscellaneous Dangerous Goods**			
	Class 9 Miscellaneous (DGC 9)	Class 9 substances have separate storage and transport requirements. Examples: dry ice and asbestos. Aerosols are no longer Class 9 dangerous goods. They are Class 2.1 or 2.2 (gases) depending on flammability.	Substances and articles that present a danger especially during transport, not covered by other dangerous goods classes

	Subsidiary Class	*The may also be referred to as the secondary risk or subrisk. The subsidiary risk label is represented as the normal label with the number deleted.*	*Subsidiary risk categories are assigned to dangerous goods that pose more than the risk that is denoted by their class.*

Appendix 12: Incompatibility Segregation Tool

Compatibility Chart Key

Symbol	Meaning
✔	May be compatible in many cases with exceptions. Follow the alphabetical compatible goods guidance notes.
✘	Likely to be incompatible. Segregation strongly recommended, follow the segregation of guidance notes for incompatible goods.

Compatibility and Segregation Chart

Class of goods	2.1	2.2	2.2 SR 5.1	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	8	9	Combustible liquids
2.1	✔ A	✔ B	✘ S1	✘ S1	✘ S2	✘ S2	✘ S4	✘ S5	✘ S2	✘ S4	✘ S1	✘ S1	✔ C	✘ S2
2.2	✔ B	✔ A	✔ B	✘ S1	✘ S2	✘ S2	✘ S4	✘ S5	✔ B	✘ S4	✔ B	✘ S1	✔ C	✘ S2
2.2 SR 5.1	✘ S1	✔ B	✔ B	✘ S1	✘ S2	✘ S2	✘ S4	✘ S5	✘ S2	✘ S4	✔ C	✘ S1	✔ C	✘ S2
2.3	✘ S1	✘ S1	✘ S1	✔ I	✘ S2	✘ S2	✘ S4	✘ S5	✘ S2	✘ S4	✔ C	✘ S1	✔ C	✘ S2
3	✘ S2	✘ S2	✘ S2	✘ S2	✔ A	✘ S3	✘ S4	✘ S5	✘ S2	✘ S4	✘ S3	✔ B	✔ B	✔ B
4.1	✘ S2	✘ S2	✘ S2	✘ S2	✘ S2	✔ A	✘ S4	✘ S5	✘ S2	✘ S4	✘ S3	✔ B	✔ B	✘ S2
4.2	✘ S4	✘ S4	✘ S4	✘ S4	✘ S4	✘ S4	✔ A	✘ S5	✘ S4	✘ S4	✘ S4	✔ B	✔ B	✘ S4
4.3	✘ S5	✘ S5	✘ S5	✘ S5	✘ S5	✘ S5	✘ S5	✔ A	✘ S5	✘ S5	✘ S5	✘ S5	✔ G	✘ S5
5.1	✘ S2	✔ B	✘ S2	✘ S2	✘ S2	✘ S2	✘ S4	✘ S5	✔ D	✘ S4	✔ C	✘ S3	✔ C	✘ S3
5.2	✘ S4	✘ S4	✘ S4	✘ S4	✘ S4	✘ S4	✘ S4	✘ S5	✘ S4	✔ E	✔ CE	✘ S4	✔ CE	✘ S4
6.1	✘ S1	✔ B	✔ C	✔ C	✘ S3	✘ S3	✘ S4	✘ S5	✔ C	✔ CE	✔ A	✔ H	✔ B	✘ S3
8	✘ S1	✘ S1	✘ S1	✘ S1	✔ B	✔ B	✔ B	✘ S5	✘ S3	✘ S4	✔ H	✔ F	✔ C	✘ S3

9	✓ C	✓ C	✓ C	✓ C	✓ B	✓ B	✓ B	✓ G	✓ C	✓ CE	✓ B	✓ C	✓ A	✓ B
Combustible Liquids	✗ S2	✗ S2	✗ S2	✗ S2	✓ B	✗ S2	✗ S4	✗ S5	✗ S3	✗ S4	✗ S3	✗ S3	✓ B	✓ A

Segregation Guidance Notes for Incompatible Goods

Segregation Class	Segregation Guidance Notes
S1	Segregate these goods by 3m or more in a well-ventilated area. For liquid dangerous goods the distance is measured from the edge of the spill catchment area. See supplementary notes 6 and 7.
S2	Segregate by 5 m or more. If one of the dangerous goods is a liquid, measure the distance from the edge of the spill catchment area. Liquid dangerous goods should be located within a separate spill catchment area. See supplementary notes 6 and 7.
S3	Segregate by 3 m or more for PG III goods and 5m or more for PG II, PG I goods or where the goods may react dangerously. If both are solids then a minimum of 1m separation may be used. Where one of the goods is a liquid the distance is measured from the edge of the spill catchment area. See supplementary notes 6 and 7.
S4	Segregation preferred by the use of fire-rated partitioned areas. Consider use of separate detached building for organic peroxides and for highly pyrophoric class 4.2 goods.
S5	Segregation of class 4.3 preferred by use of a separate, detached building without water based fire suppression system.

Compatible Goods Guidance Notes

A. In most cases materials of the same class will be compatible. However, not all materials with different *UN Numbers* will always be compatible. The SDS should be checked.

B. In many cases the goods will be compatible. Must check for subsidiary risk compatibility and the SDS.

C. If one of the goods present is also a fire risk substance (one of class 2.1, 3, 4, 5, a combustible liquid or has a subsidiary risk of one of these) or elevated temperature goods, segregation is required by at least 3 m or more. Sub-risk MUST be considered. Other exceptions apply. Check the SDS.

D. Not all class 5.1 goods are compatible as follows:

▸ *Ammonium nitrate is not compatible with tetranitromethane, dichloroisocyanuric acid, any bromate, chlorate, chlorite, hypochlorites, or chloroisocyanurate, or any inorganic nitrate*
▸ *Calcium hypochlorite (and its mixtures) are incompatible with dichloroisocyanuric acid, ammonium nitrate, or any chloroisocyanurate.*

E. Organic peroxides are highly reactive materials. Please check the SDS to ensure compatibility.

F. Where one of the goods to be stored together is a concentrated strong acid and the other a concentrated strong alkali, they should be deemed incompatible.

G. Class 4.3 goods must not be stored next to goods that are in a solution containing water, or where water or foam is the chosen firefighting/spill/leak dispersal or suppression media for the storage area.

H. Except where the class 6.1 is cyanide and the class 8 an acid. Check the SDS.

Toxic gases ammonia and chlorine must be segregated due to risk of explosion. It is important to refer to the SDS for incompatibilities within this class division. It is strongly recommended that each different toxic gas (Class 2.3) be segregated unless information in the SDS says otherwise.

Supplementary Notes

1. **Class 2 dangerous goods** (i.e. gases) are generally not recommended to be stored with any *other* class of dangerous goods particularly flammable dangerous goods due to the risk of flame impingement and over pressurization of cylinders. Corrosive goods can cause corrosion damage to the gas cylinder walls and thus should be kept away from class 2. In a fire situation, gas cylinders need to have copious quantities of water applied to keep them cool. Toxic gases are stored away from other gases to minimize the release of toxic gases in a fire with other gases.

2. **Class 6.1 dangerous goods** are not recommended to be stored with fire risk goods or gas cylinders. In the event of a fire, the toxic material will be liberated and may be spread more effectively due to the heat of the fire or explosion of gas cylinders.

3. Two or more goods within the same class with incompatible subsidiary risk should be kept apart.

4. The packing group (PG) of dangerous goods denotes the magnitude of danger the material poses from its hazard. PG I is most dangerous. PG II these are more dangerous than PG III. If one of the incompatible materials is a PG I or II dangerous goods it is recommended that a greater segregation distance or other means of segregation is employed.

5. **If class 4.3 dangerous goods** are stored or handled care needs to be taken to segregate these away from all containers of aqueous (water containing) solutions even if the solutions are not dangerous goods. The areas these materials are stored in must not be serviced by a water based fire suppression system.

6. If one of the incompatible goods is a liquid OR a solid that is likely to melt from the heat of a fire, separate spill catchment systems or means of separating the incompatible goods must be considered. Solid dangerous goods should not be stored in direct contact with floor surface to avoid contact with liquids.

7. Fire rated walls constructed of appropriate impervious, chemically resistant materials may be used if provided with an FRL of 240/240/240. Timber structures are not appropriate barriers.

8. In the case of incompatible gases in cylinders intended for use in welding (such as acetylene and oxygen), these gases may be stored together in a purpose built cradle and separated when not in use for extended periods of time.

9. **For oxidizing agents**: Although only dangerous goods and combustible liquids feature in the compatibility chart care must also be taken to segregate oxidizers from those dangerous goods and other materials that are combustible in nature (e.g. polymeric beads, cotton bales, excess packing materials). Chlorine and some other halogens are considered potent oxidizers even though their class and assigned with any oxidizing agent subsidiary risk under the dangerous goods classification system.

[Courtesy of WHS, QLD]

http://www.deir.qld.gov.au/workplace/hazards/hazchem/managing-incompatible-goods/segregation-tool/index.htm

Appendix 13: List of Chemwatch default Label Templates

Label Template Name	Legislative Format
14 labels per A4 Portrait page in GHS format	GHS format
14 labels per A4 Portrait page in non-GHS format	DSD/DPD (non GHS) RCode format
14 labels per A4 Portrait page in USA non GHS format	non GHS format
27 labels per A4 Portrait page for Laboratory use	DSD/DPD (non GHS) RCode format
27 labels per A4 Portrait page for Laboratory use with NFPA diamond	DSD/DPD (non GHS) RCode format
A4 size Landscape Transport label	DSD/DPD (non GHS) RCode format
A4 size Portrait label	DSD/DPD (non GHS) RCode format
1 Conical label per A4 Landscape page in GHS format	GHS format
1 Conical label per A4 Landscape page in non-GHS format	DSD/DPD (non GHS) RCode format
1 label per A3 Portrait page in non-GHS format with Transport information	DSD/DPD (non GHS) RCode format
1 label per A3 Portrait page in NZ format with Transport information	New Zealand GHS format
1 label per A4 Landscape page in GHS format with Transport information	GHS format
1 label per A4 Landscape page in non GHS format with Transport information	DSD/DPD (non GHS) RCode format
1 label per A4 Landscape page in NZ format with Transport information	New Zealand GHS format
1 label per A4 Landscape page in USA non GHS format with Transport information	GHS format
1 label per A4 page in GHS format	GHS format
1 label per A4 Portrait page in GHS format with data in 3 languages	GHS format
1 medium size Conical label per A4 Landscape page in GHS format	GHS format
2 labels per A4 Portrait page in GHS format	GHS format
2 labels per A4 Portrait page in GHS format with Transport information	GHS format
2 labels per A4 Portrait page in non GHS format	Non GHS format
2 labels per A4 Portrait page in NZ format	New Zealand GHS format
2 labels per A4 Portrait page in NZ format with Transport information	New Zealand GHS format
3 Conical labels per A4 Portrait page in GHS format	GHS format
3 Conical labels per A4 Portrait page in non GHS format	Non GHS format
3 labels per A4 Portrait page in non GHS format	Non GHS format
4 labels per A4 Portrait page in GHS format	GHS format
4 labels per A4 Portrait page in non GHS format	Non GHS format
4 labels per A4 Portrait page in NZ format	New Zealand GHS format
Emergency Information Panel Diamond 1 or 2 or 3	Default settings
Dropper bottle – 14 labels per A4 Portrait page on GHS with Transport information	GHS format
Canada EN label A4	Canadian format

Canada FR label A4	Canadian format
Malaysia GHS 2x Labels landscape	Malaysian format
Chinese label 500L-1000L	Chinese format
Chinese small 100ml	Chinese format
Avery 5160-30 labels on 8-5x11 Page with hazard phrases	Avery format
Avery 5160-30 labels on 8-5x11 Page	Avery format
Avery 2x4 template	Avery format
Avery 2x7 template	Avery format
Avery 2x8 template	Avery format
Avery 3x7 template	Avery format
Avery 3x10 template	Avery format
Avery 3x11 template	Avery format
Avery 4x12 template	Avery format
Avery 5x13 template	Avery format
Emergency Information Panel and Diamond_1, _2, _3	Emergency format
China Workplace Label 800x600mm	Chinese format
Malaysia – GHS 125mL or less, 14xlabels portrait	Malaysian format
TREM Card	Default settings
Note: MSDS Settings and Filter conditions effect the data	Country, MSDS Format…

IT'S NOT THE HAZARD IT'S THE RISK!

Chemwatch
1227 Glen Huntly Road
Glen Huntly
Victoria 3613

Telephone: +61 3 9573 3100
Facsimile: +61 3 9572 4777
Email: info@chemwatch.net
Website: www.chemwatch.net