



QUERY BUILDER USER GUIDE

Version 2

GoldFFX



CHEMWATCH

Melbourne, Australia

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Glossary

ADM	Domain Administrator of the Chemwatch system within your organisation
ADG	Australian Dangerous Goods Code
AuthorITe	Create SDS application module
CAS	Chemical Abstract Substance
CHEMTOURAGE	Chemwatch Entourage for service desk support
CLP	Classification, Labeling, and Packaging
CSCL	Chemical Substances Control Law
COBRA	Control Banding Risk Assessment
COSHH	Control of Substances Hazardous to Health
CREDITE POSTERI	Create Mixture application module, Physical Properties
CW No	Chemwatch Number
DE	Data Extraction
DET	Chemwatch system Data Extraction Tool
DG	Dangerous Goods
DGEN	Document Generator for Labels module
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Globally Harmonised System for the Classification of Hazardous Chemicals and Labelling
HAZCOM	Hazard Communication Standard
IFC	International Fire Code, USA
ILO	International Labour Organisation, United Nations
ISHA	Industrial Safety and Health Act, Japan
MFA	Manifest Facility Area
MQR	Manifest Quantity Report
NFPA	National Fire Protection, USA
OEL	Occupational Exposure Limit
PDSCA	Poisonous and Deleterious Substances Control Act

PPE	Personal Protective Equipment
PKG	Packing Group for Dangerous Goods
PTN	Project Tracking Number
OSHA	Occupational Safety and Health Administration
QR Code	Quick Response
REACH	Registration, Evaluation, Authorization, and Restriction of Chemicals
RA	Risk Assessment
SAC	Standardization Administration of China
SI	International System of Units
SMARTSUITE	Smart Vendor, Gold, Mini SDS, Emergency Response Mobile App
SR	Subsidiary Risk for Dangerous Goods
SOP	Standard Operating Procedure
SUSMP	Classification of Medicines and Poisons in Australia
TSCA	Toxic Substances Control Act
UGD	User Gold Data
UI	User interface
UN	United Nations
VGD	Vendor Gold Data

About the Query Builder User Guide

The Query Builder User Guide is based on the new development of Chemwatch's latest chemicals management system. The topics covered in this guide are focused primarily on creating queries, associating tags with automatic queries to conduct specific search criteria. The Query Builder search mode is available within the Backpack, GoldFFX and Chemeritus product packages to enable advanced users to create queries to find materials that satisfy the specific query criteria.

Mode features, icons and buttons are used across this guide to emphasize a specific activity where stepwise tasks are provided in respective topics as a reference to learning how to use the system to meet specific objectives.

Query Builder Tab

 Home <i>Core Module</i>	 Query Builder
+ Add a Query	 Associate a Query with Automatic Tags

Features

 Query Search Parameters	 Print Out
 Edit Query	 Query Builder User Privileges
 Live Help Chat	 Manifest and Hazards 

Information Reference

The information icon  provides more information in any topic or section of this guide.

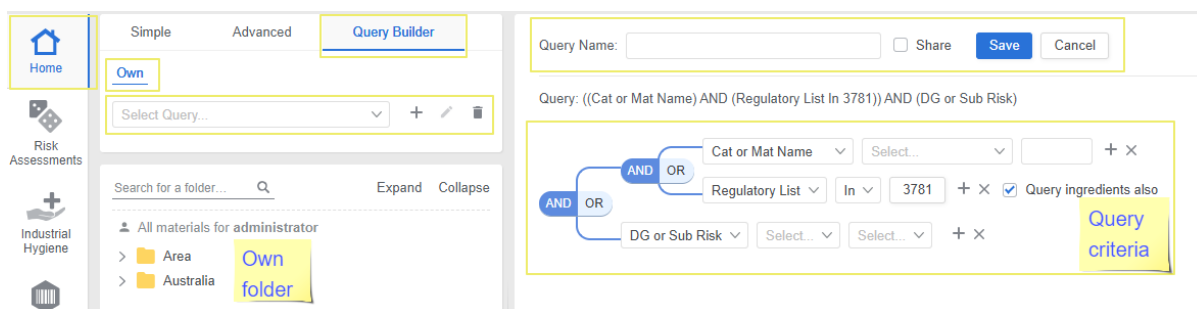
1.0 Query Builder Search

This topic will cover the following objectives.

- Create a query
- Edit a query
- Search operand
- Search by query
- Query builder context menu
- Query ingredients also
- Share query
- User accessibility to query builder mode



Query Builder is an advanced search mode designed to construct search queries for specific chemicals by using a set of rules or search criteria. This mode is accessible through the search panel's "Query Builder" tab.

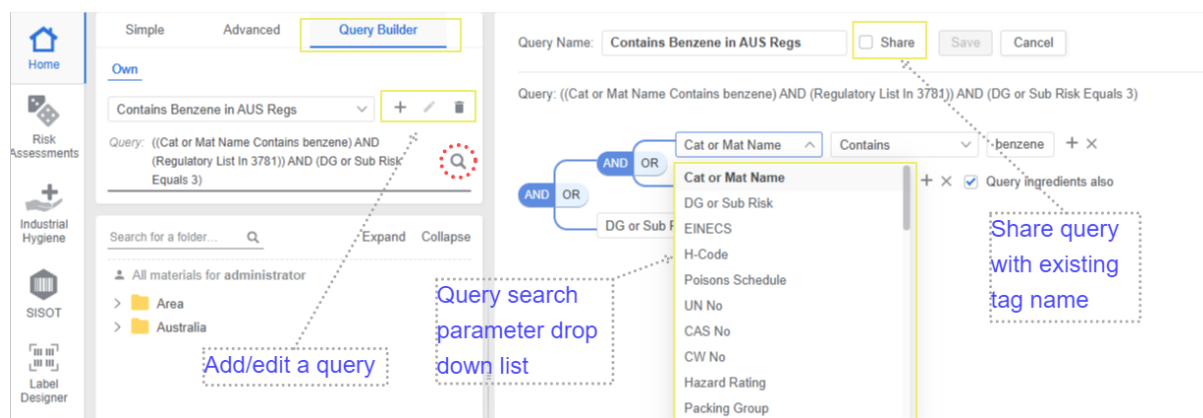


This chapter provides information on how to use the query builder mode to create queries to search for chemicals of interest located in your own folder inventory. It can be considered as an extension to the Simple Search mode for users that have been granted access to manage queries and run queries in Query Builder mode.

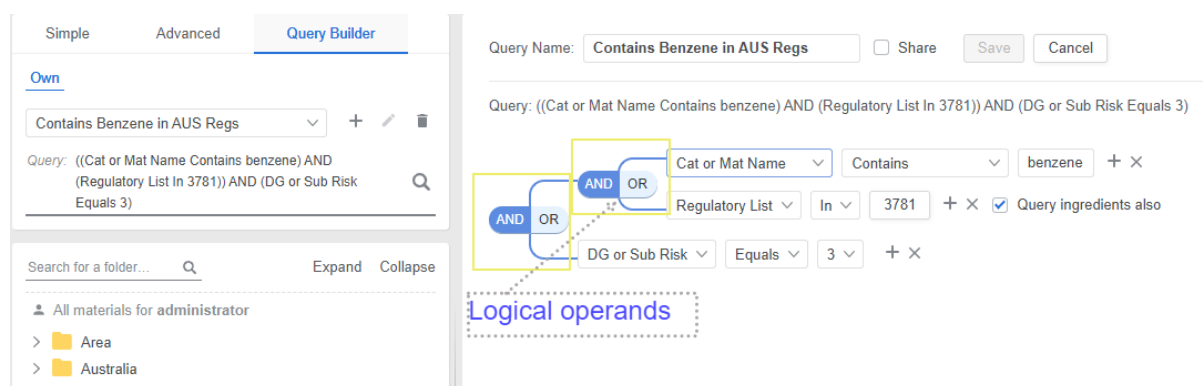
This search mode allows users to refine and tailor their searches by incorporating logical operands (such as AND, OR) and properties to determine which of their chemicals that meet the query search criteria. This search approach enhances the precision in chemical queries to find the relevant chemicals.

- Create a specific query and/or
- Include ingredients to the search query
- Incorporate operands
- Associate a query with tags

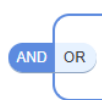
Chemical tagging is a practice used to identify markers to substances for the purpose of tracking, analysing data or improving search results for furthering categorisation of chemical search results-based set criteria.

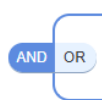


Logical Operands

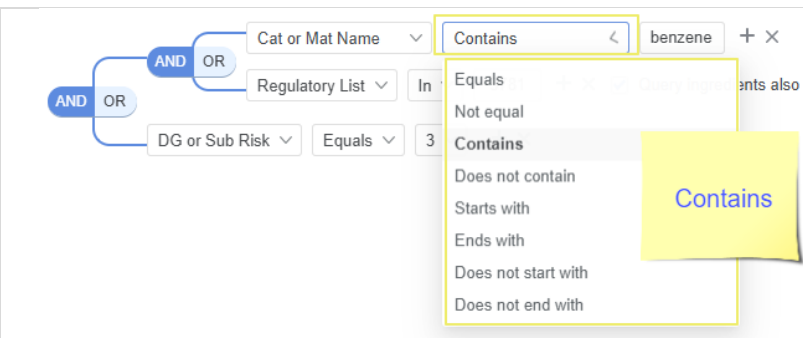


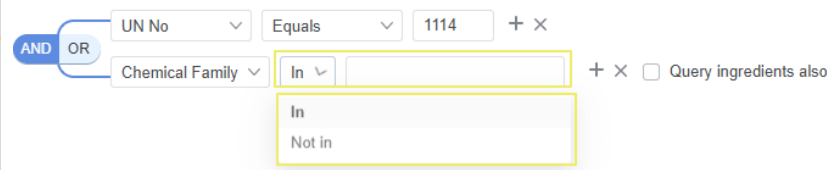
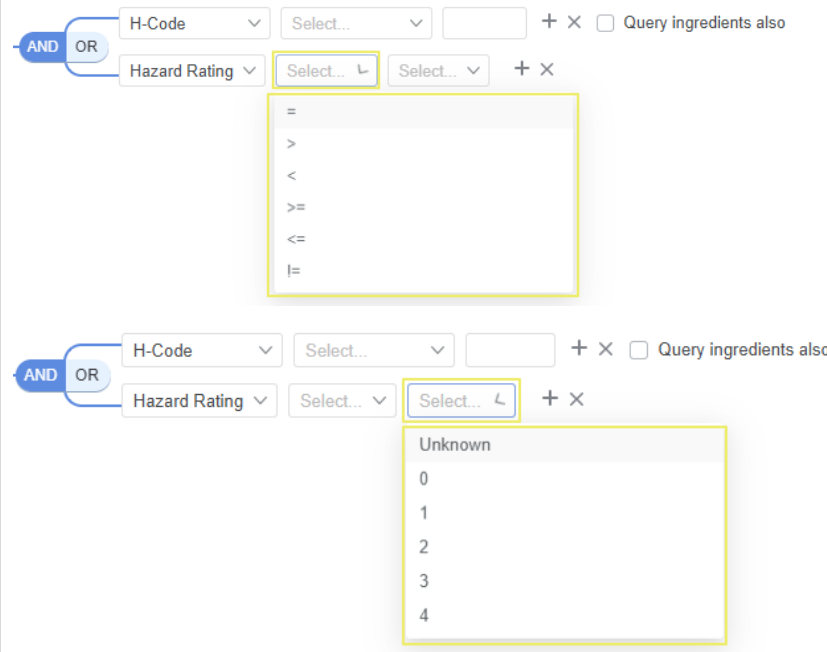
The Add button  in the query allows the addition of the Query Builder operands (Boolean operators) to help refine searches by allowing the combination or exclusion of specific search criteria to narrow down or expand the scope of the query. Combining operands (such as AND, OR) create more complex and precise queries to produce more succinct search results.



These  operators assist in navigating complex datasets and extracting relevant information based on the set criteria.

Operator	Button	Description
AND		Used to combine multiple criteria to meet tailored conditions to retrieve records that satisfy all the included terms.
OR		Used to broaden the search by including results that meet at least one of the specified search criteria. It helps explore a wider search to identify an array of related chemicals dependent on the search terms or conditions.

String Operand Drop Down List Options	
Equals	
Not Equal	
Contains	
Does not contain	
Starts with	
Ends with	
Does not start with	
Does not end with	

Search Parameters and Operands	
Chemical Family	
In	
Not In	
Hazard Rating	
=	
>	
<	
>=	
<=	
!=	
Unknown	
0	
1	
2	
3	
4	

The example below illustrates the possible combinations of a query using the search parameter to combine and expand a query depending on the search criteria.

Query Name: ☐ Share

Query: ((Cat or Mat Name Contains benzene) AND (Regulatory List In 3781) AND ((DG or Sub Risk Equals 3) AND ((UN No Equals 1114) AND ((Chemical Family In G9109) AND ((Hazard Rating > 2) AND ((Packing Group Equals III) AND (H-Code Contains H351))))))

1.1 Create a Basic Query

The administrator of the system has the full scope of the Query Builder mode's capabilities by default. The Query Builder mode will show the three buttons to "Add", "Edit" and "Recycle" to create and manage queries.

Simple Advanced **Query Builder**

Own

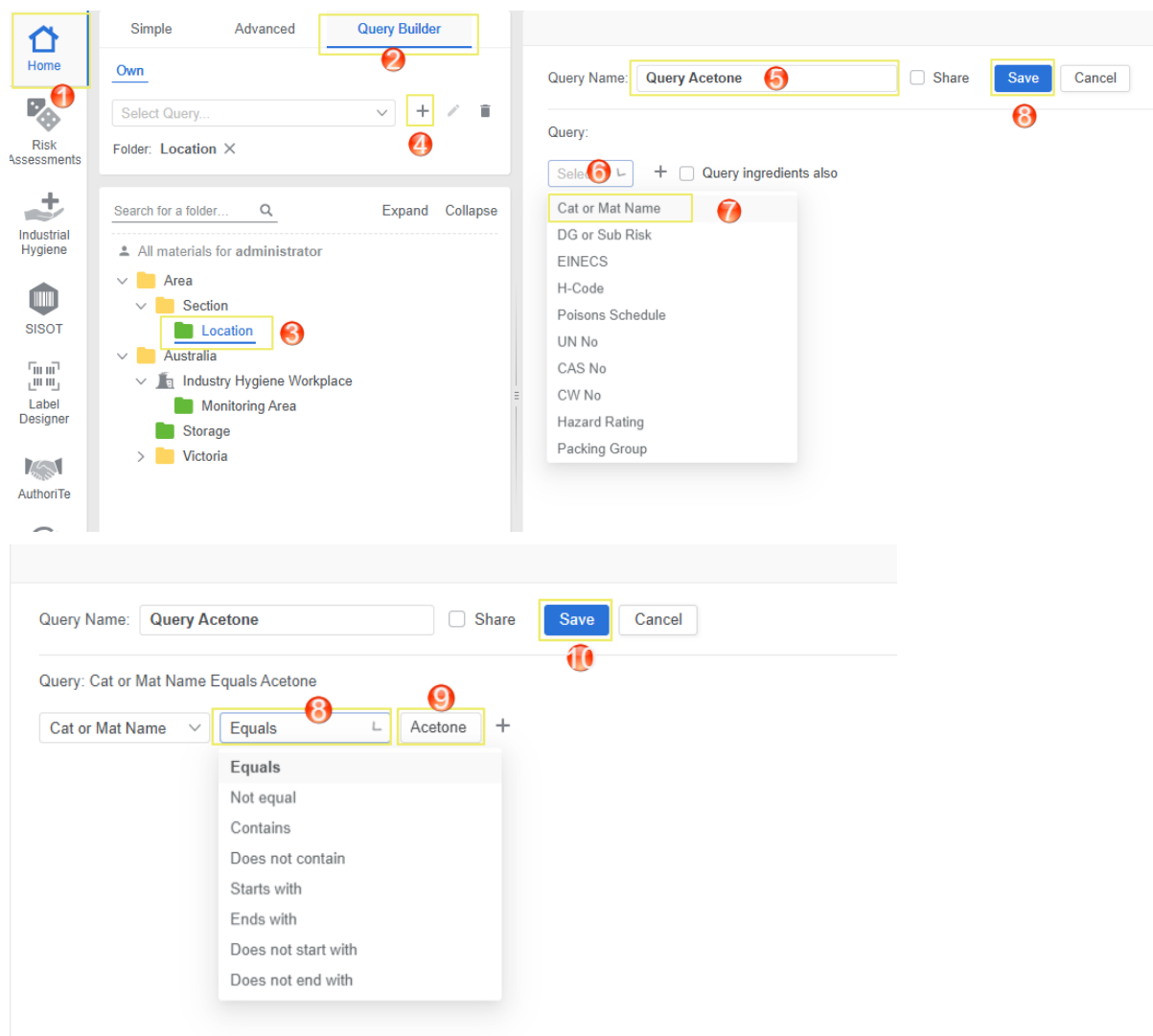
Select Query...   

Button	Description
Add 	The Add button enables user to create a query.
Edit 	The Edit button provides user with the ability to edit an existing query.
Recycle 	The Recycle button allows user to delete a query.

The steps below illustrate how to add (create) a query for a Cat or Material Name that equals "Acetone". This search query excludes ingredients. This query is a basic search to illustrate how to create a simple query to find an exact match in your inventory folder.

Steps: Create a Basic Query for a Material

1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click on a **Folder** location to list materials.
4. Click the **Add** button  on the search panel to create a query.
5. Type the name of the query in the **Query Name** text field.
6. Click the **drop-down arrow** to list the search **parameter** options.
7. Click the **Query Search Parameter** from the list of options.
8. Click the **Operand** field drop-down arrow to select the string operand, e.g., Equals.
9. Type the **Cat or Material Name** in the text field. In this worked example, the "Add Ingredients also" option is ignored.
10. Click the **Save** button . Note that the **Share** option for tagging the query is ignored in this worked example.



The screenshot illustrates the process of creating a query in the Query Builder. The interface is divided into several sections:

- Left Sidebar:** Contains navigation icons for Home, Risk Assessments, Industrial Hygiene, SISOT, Label Designer, and AuthoriTe.
- Top Tabs:** Simple, Advanced, and Query Builder (selected).
- Query Name Field:** Labeled 'Query Name: Query Acetone' with a magnifying glass icon for search.
- Folder Selection:** A tree view showing the hierarchy: All materials for administrator > Area > Section > Location (selected).
- Query Builder:** A section where the query is defined. It shows 'Cat or Mat Name' selected from a dropdown, followed by 'Equals' and 'Acetone'.
- Save/Cancel Buttons:** Located at the top right of the query builder section.

Red numbered callouts (1-9) indicate the sequence of actions: 1. Home icon, 2. Query Builder tab, 3. Location folder, 4. Search icon, 5. Query Name field, 6. Search icon, 7. Cat or Mat Name dropdown, 8. Equals operator, 9. Acetone value.

 **Success**
The Query was saved

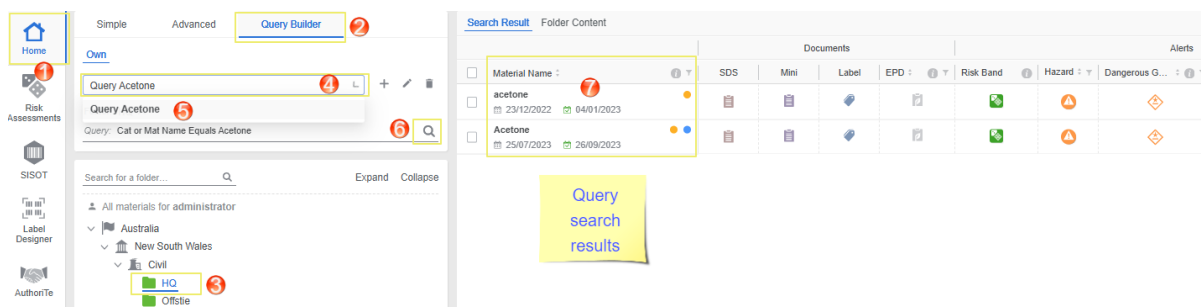
A message confirms successful operation

1.2 Search by Cat or Material Name Query

The steps below illustrate how to use an existing search query to quickly find SDS in your own inventory for a product located in a selected folder location. Note that the search query excludes ingredients.

Steps: Search for a Cat or Material Name by Query

1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click on a **Folder** location to list materials.
4. Click the drop-down arrow located on the query name text field.
5. Select the **Query Name**.
6. Click the **Magnifying Glass**  to search.
7. Search results display the exact material in the selected folder location.

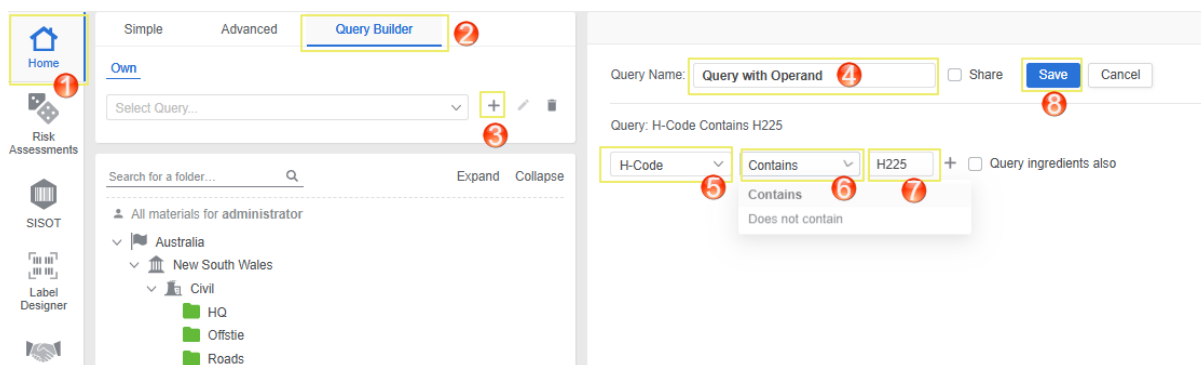


1.3 Create a Query Containing an H-Code and for Search Material(s)

The steps below show how to Add (Create) a query that contains an H-Code to search for hazardous chemicals that are classified as highly flammable liquids, vapours in your inventory. Note that the query excludes searching the database for “Ingredients also”.

Steps: Create a Query that contains an H-Code and Search for Material(s)

1. Open **Home** module.
2. Click the **Query Builder** tab.
3. Click the **Add** button **+** on the search panel to create a query.
4. Type the name of the query in the **Query Name** text field.
5. Click the **drop-down arrow** to list the search **parameter** options and select **H-Code**.
6. Click the **Operand** field drop-down arrow to select the string operand, e.g., **Contains**.
7. Type the **H-Code** in the text field, e.g. H225.
8. Click the **Save** button.
9. Click the **Magnifying Glass** to search for any material in your own inventory that contains the hazard code H225. This GHS H-Code 255 means that the query will be looking for hazardous chemicals that are classified as highly flammable liquids and vapour.
10. Search results display the exact material(s) found in your inventory.



The screenshot shows the Chemwatch Query Builder interface. On the left, a sidebar lists folders for Australia, New South Wales, and Queensland, with sub-folders like Civil, HQ, Offsite, Roads, Food, Water, and Queensland. The main area displays a table of materials with columns: Material Name, CAS No, Hazard, Hazard Codes, Country, Language, and Vendor. The 'Hazard Codes' column is highlighted with a red dashed circle. A red dashed arrow points from the 'Hazard Codes' column to the 'Query' field, which contains 'H-Code Contains H225'. The 'Query' field is also highlighted with a red dashed circle. The 'Query' field has a dropdown arrow and a magnifying glass icon. The 'Query' field is labeled 'Query: H-Code Contains H225'. The 'Query' field is also labeled 'Query: H-Code Contains H225'.

1.4 Create a Query Containing an Operand and Search for Material(s)

The steps below show how to Add (Create) a query that contains an H-Code to search for hazardous chemicals that are classified as highly flammable liquids, vapours in your inventory. This query will include an Operand (AND, OR) to combine multiple criteria or expand the search to include search results that meet at least one of the specified search criteria. Note that the query excludes searching the database for “Ingredients also”.

Steps: Create a Query that contains an Operand and Search for Material(s)

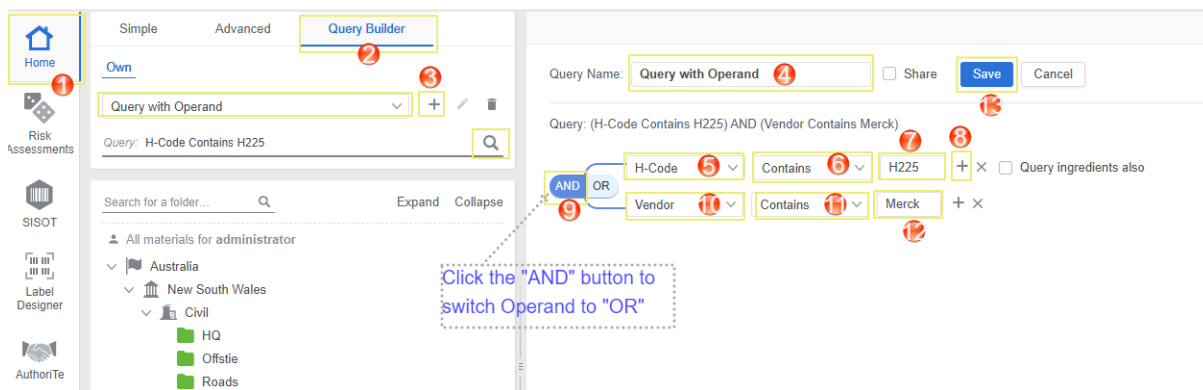
1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click the **Add** button  on the search panel to create a query.
4. Type the name of the query in the **Query Name** text field.
5. Click the **drop-down arrow** to list the search **parameter** options and select H-Code.
6. Click the **Operand** field drop-down arrow to select the string operand, e.g., Contains.
7. Type the **H-Code** in the text field, e.g. H225.
8. Click the **Add button**  to add Operand (AND or OR).
9. Operand defaults to **AND** (you may choose to select OR to expand the search query).

10. Select the search parameter from the drop-down arrow, e.g., **Vendor**.
11. Click the **Operand** field drop-down arrow to select the string, e.g., Contains.
12. Type the specific **Vendor Name** in the text field, e.g. Merck.
13. Click the **Save** button .

Message display successful operation.

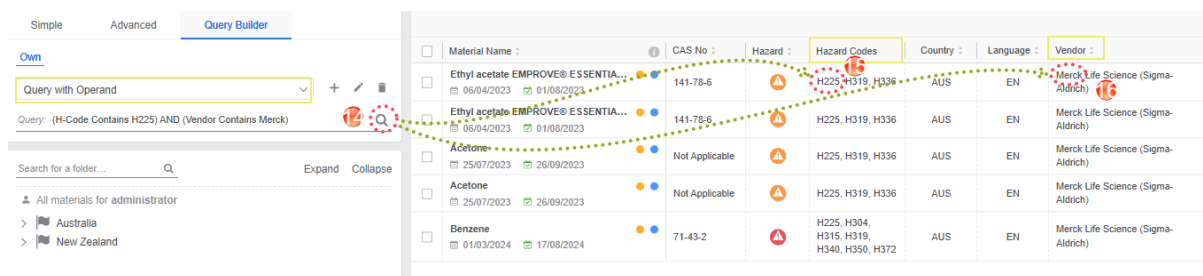
 **Success** 
The Query was saved

14. Click the **Magnifying Glass**  to search for any material in your own inventory that contains the hazard code H225. The query will also include specific Vendor.
15. Search results display the exact material(s) found in your inventory.



Click the "AND" button to switch Operand to "OR"

The search results render found records in your own inventory. In this worked example, the hazard code column displays the H225 code, and the vendor column shows the respective manufacturer "Merck" as per the query operand.



Material Name	CAS No.	Hazard	Hazard Codes	Country	Language	Vendor
Ethyl acetate EMPROVE® ESSENTIA...	141-78-6	H225, H319, H336	AUS	EN	Merck Life Science (Sigma-Aldrich)	
Ethyl acetate EMPROVE® ESSENTIA...	141-78-6	H225, H319, H336	AUS	EN	Merck Life Science (Sigma-Aldrich)	
Acetone	25-07-2023	Not Applicable	H225, H319, H336	AUS	EN	Merck Life Science (Sigma-Aldrich)
Acetone	25-07-2023	Not Applicable	H225, H319, H336	AUS	EN	Merck Life Science (Sigma-Aldrich)
Benzene	01-03-2024	71-43-2	H225, H304, H315, H319, H340, H350, H372	AUS	EN	Merck Life Science (Sigma-Aldrich)

1.5 Regulation Name Query

The query builder mode provides users with a search function to find chemicals within their chemical inventory based on regulatory related instruments. The regulations of chemicals are multifaced through legislative frameworks designed to ensure safe handling, safe use, labelling, safe storage and disposal to protect human health and the environment. At the core of these instruments are regulatory lists of chemicals, categorised based on their properties, potential hazards and risks.

These regulatory lists form the basis for implementing exposure limits at the local level to adhere to compliance with safety standards. The identification of regulated hazardous chemicals is crucial in ensuring a high level of compliance with chemicals management within the various sectors of the chemical and the environmental economy. The following are some points providing key types of regulatory lists essential for fostering safer working environments and the advancement of chemical risk management.

Regulatory Lists

Summary

Prohibited or Banned Chemical Lists

Chemicals that are banned due to their extreme hazards or potential for misuse, e.g., Annex XVII under REACH.

Restricted Chemical Lists

Chemicals permitted only under certain conditions or specific applications, e.g., REACH Regulation, Annex XIV for prior approval requirements of chemical use.

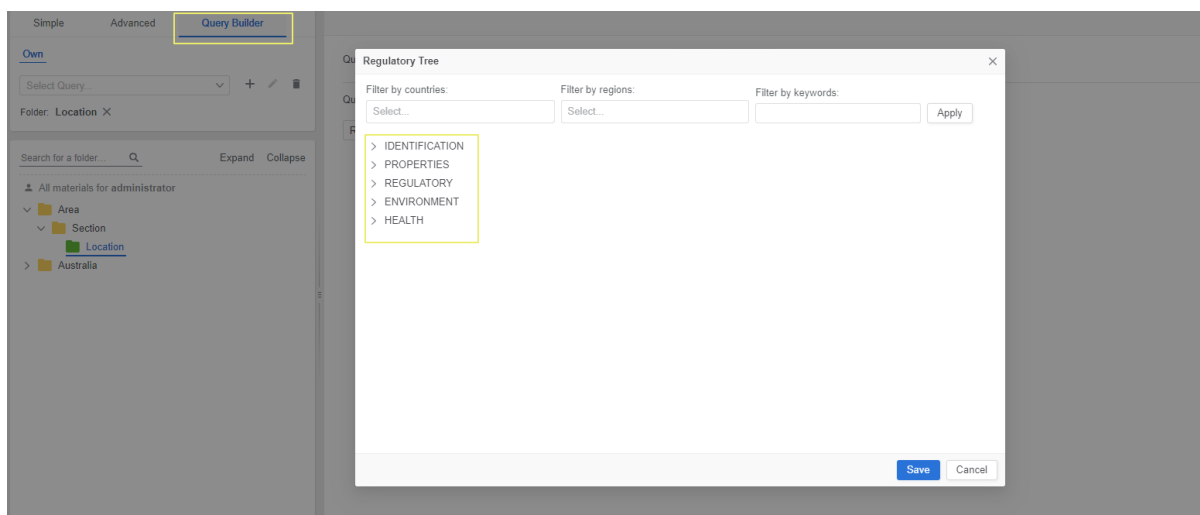
Regulatory Lists

Summary

Substances of Very High Concern (SVHC)	Chemicals with severe health or environmental risks, e.g., Carcinogens, mutagens and reproductive health. For example, REACH identifies SVHCs prioritized for inclusion in the Authorisation List.
Priority Chemical Lists	Chemicals for immediate
Classification Lists	Chemicals classification based on their physical, health and environmental hazards, e.g., GHS provides the standard hazard classes and categories of hazardous chemicals.
Emission or Exposure Limit Lists	Permissible exposure limits (PELs) or emission thresholds to minimize risks to workers and the environment, e.g., OSHA PELs (USA), WHO Guidelines, OELs (Occupational Exposure Limits)

In query builder mode, the regulatory tree structure is categorised with a regulatory tree which consists of the following directories.

- Identification
- Properties
- Regulatory
- Environmental
- Health



The regulatory tree contains filters by:

- Countries
- Regions
- Keywords

These filters help users to narrow down searches for specific information by typing keywords to identify the exact or related regulatory list applicable to the filtering criteria.

Regulatory Tree ×

Filter by countries:	Filter by regions:	Filter by keywords:
	Select...	
Afghanistan	International	Apply
Åland Islands	North America	
Albania	Central and South America	
Algeria	Asia/Pacific	
American Samoa	Europe	
Andorra	Africa/Middle East	
Angola	Asean	
Anguilla	Nordic	
Antarctica	The Caribbean	
Antigua and Barbuda	Antarctic Region	

Keyword Search Result for “Exposure Limits”

Regulatory Tree ×

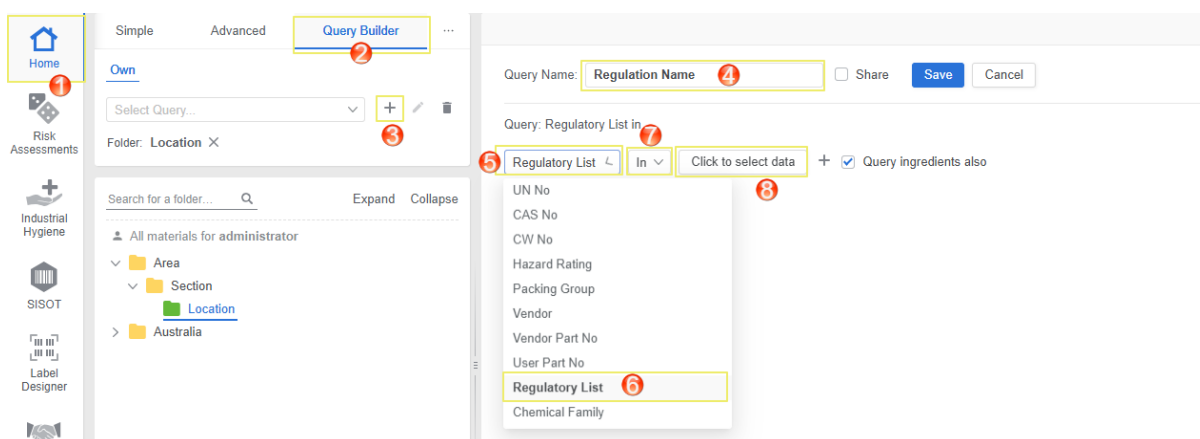
Filter by countries:	Filter by regions:	Filter by keywords:
Select...	Select...	Exposure Limits
		Apply

▼ REGULATORY

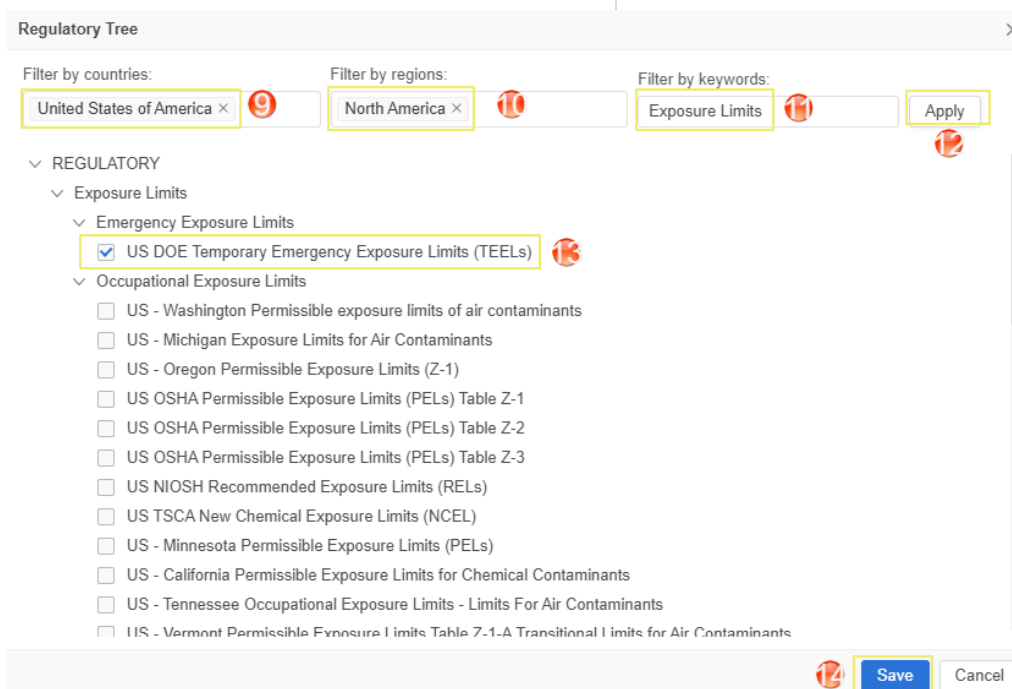
- ▼ **Exposure Limits**
 - ▼ Emergency **Exposure Limits**
 - ☐ US DOE Temporary Emergency **Exposure Limits** (TEELs)
 - ▼ Biological **Exposure Limits**
 - ☐ Switzerland Biological **Exposure Limits** (BAT values) (German)
 - ☐ UK Workplace **Exposure Limits** (WELs) - Biological Monitoring Guidance Values
 - ☐ Chile Occupational **Exposure Limits** - Biological Limit Values (Spanish)
 - ☐ Germany Recommended **Exposure Limits** - Biological Workplace Tolerance Values (BAT)
 - ▼ Occupational **Exposure Limits**
 - ☐ US - Washington Permissible **exposure limits** of air contaminants
 - ☐ UK Workplace **Exposure Limits** (WELs)
 - ☐ Japan Occupational **Exposure Limits** (Japanese)
 - ☐ Japan Occupational **Exposure Limits** - Provisional Values (Japanese)
 - ☐ Japan Occupational **Exposure Limits** - Reference values corresponding to an individual excess lifetime risk of cancer (Japanese)
 - ☐ Japan Occupational **Exposure Limits** for Dusts (Japanese)

Steps: Create a Regulation Name Query to Search for Materials in Own Inventory

1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click the **Add** button  on the search panel to create a query.
4. Type the name of the query in the **Query Name** text field.
5. Click the **Search Parameter** drop-down **arrow** to list the search parameter options.
6. Select **Regulatory List**.
7. Click the **Operand** field drop-down arrow to select the string operand, e.g., In.
8. Press the “Click to select data” field to open the Regulatory Tree window.

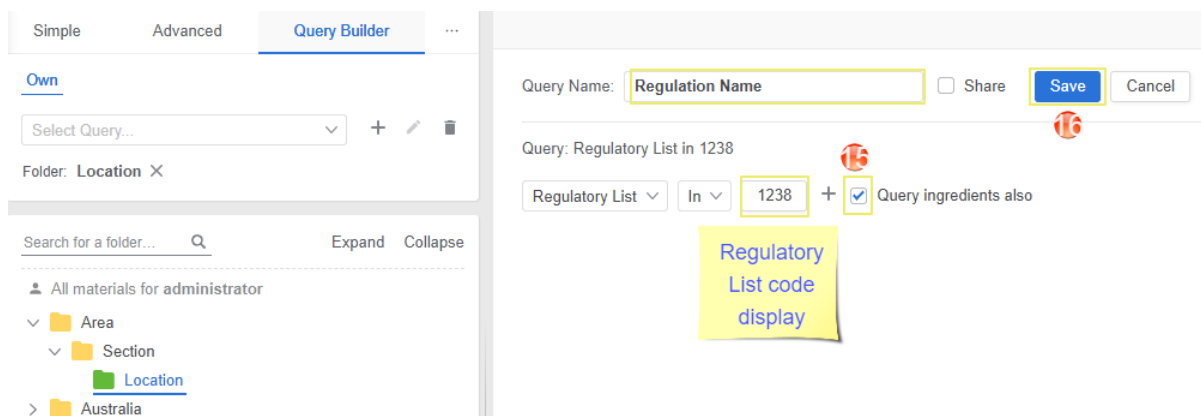


9. Filter by **Country**, e.g., United States.
10. Filter by **Region**, e.g., North America.
11. Type the **Keyword** to narrow the search, e.g., Exposure Limit.
12. Click the **Apply** button.
13. Select the relevant exposure limit **regulatory list checkbox** from the results. Note the regulatory code gets displayed in the field.
14. Click the **Save** button  on the regulatory tree window.

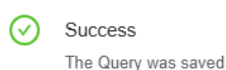


15. (Optional) Click the **Query ingredients also** checkbox to include any ingredients in the query.

16. Click the **Save** button  to save the query.



A confirmation message displays successful operation.



1.5.1 Search by Regulation Name Query

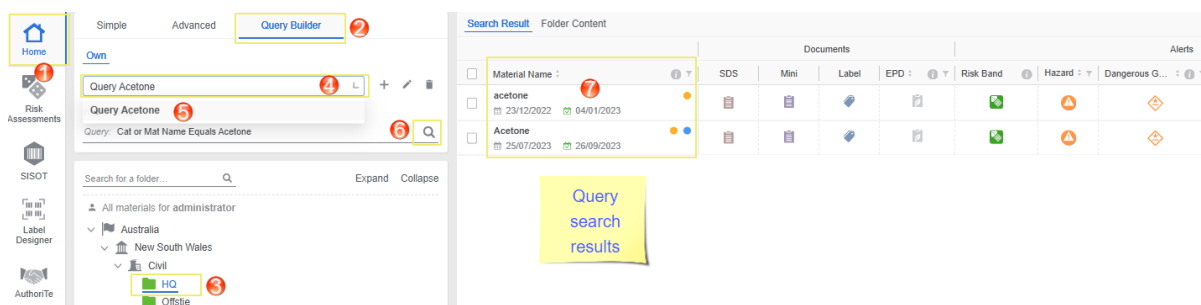
The steps below illustrate how to use an existing search query to quickly find materials in your own inventory for a product located in a selected folder location. Note that the search query includes ingredients.

Steps: Search By Regulation Name by Query

1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click on a **Folder** location to list materials.
4. Click the **Query drop-down arrow** located on the query name text field. Select the **Query Name**, e.g., Regulation Name.

5. Click the **Magnifying Glass**  to search.

Search results display the materials in the selected folder location that meet the query criteria, in this case, TEELs chemicals in the exposure limits in the USA instrument.



Search results display the materials in the selected folder location that meet the query criteria

Material Name	Part Number	CAS No	Hazard	Hazard Codes	Country	Language	Vendor
Ammonia	29/03/2021	30/05/2024		H221, H280, H314, H332, H335, H400, EUH071	USA	EN	Air Products (Air Products & Chemicals)
Hydrogen sulfide	29/04/2021	15/07/2023		H220, H280, H330, H400	GBR	EN	Merck
Sulfur Dioxide	29/09/2021	27/04/2022		H280, H314, H318, H331	USA	EN	Airgas (a part of Air Liquide)
CHLORINE	04/01/2022	14/06/2022		H270, H280, H314, H318, H330, H335	USA	EN	Matheson Tri-Gas
Sulfur dioxide	12/04/2022	25/01/2023		H280, H314, H318, H331	USA	EN	Merck Life Science OY (Sigma-Aldrich)
chlorine	20/06/2022	24/06/2022		H270, H280, H315, H319, H331, H335, H400, AUH044	AUS	EN	Chemwatch
hydrogen sulfide	20/06/2022	20/01/2025		H220, H280, H315, H319, H330, H400, AUH044	AUS	EN	Chemwatch

1.6 View Tags

The administrator can assign users to View and/or Manage Tags.

View Tags on the Materials Grid

Material Name	Hazard	Hazard Codes	Vendor	Current	Tags	Pkg
acetone		H225, H319, H336	Chemwatch	0	Hazardous X	II
Benzene		H225, H372, H350, H340, H319, H315, H310, H304	Agilent Technologies	600	Flammable Haz... X	II
Diesel		AUH006, H411, H351, H332, H304, H227	United Petroleum	9000	Flammable Haz... X	III
fluorine		H270, H280, H330, H314, H318, H335	Chemwatch	0		Not Applicable

Manage Tags on the Materials Grid

Material Name	Hazard	Hazard Codes	Vendor	Current	Tags	Pkg
acetone		H225, H319, H336	Chemwatch	0	Hazardous X	II
Benzene		H225, H372, H350, H340, H319, H315, H310, H304	Agilent Technologies	600	Flammable Hazard	II
Diesel		AUH006, H411, H351, H332, H304, H227	United Petroleum	9000	Flammable Haz... X	III
fluorine		H270, H280, H330, H314, H318, H335	Chemwatch	0		Not Applicable

Manage Tags on the Materials Grid through the Tags Constructor mode

Material Name	Hazard	Hazard Codes	Vendor	Current	Tags	Pkg
acetone		H225, H319, H336	Chemwatch	0	Hazardous X	II
Benzene		H225, H372, H350, H340, H319, H315, H310, H304	Agilent Technologies	600	Flammable Haz... X	II
Diesel		AUH006, H411, H351, H332, H304, H227	United Petroleum	9000	Flammable Haz... X	III

Tag Constructor

Name

Save Cancel

2.0 Tags

Tags are a user defined parameter and an optional feature. The materials grid contains a Materials Tag Constructor that allows users to view and manage/edit  tags and a tag filter  attribute to enable users to filter materials by specific tags.

☐	Material Name	Auto Approval	Pha...	Current	Volume	DG	S1	S2	PKG	UN No	Material Tags	Added On	R
☐	acetone					Not Applicable							
☐	ACETONE					No Data						06/01/2025 06:03:29	
☐	acetone											06/01/2025 06:06:23	
☐	ammonia					Not Applicable							
☐	benzene					Not Applicable							
☐	hydrogen sulfide					Not Applicable							
☐	sulfur dioxide					Not Applicable							
☐	chlorine					Not Applicable							

Generally, a tag is a piece of information that can be used to share information to other users as an alert mechanism or a means of communication about chemicals used within the workplace. Tags can be set as:

- Manual or
- Automatic

Tag Constructor

Search...

Tag Name

Tag Description

Assignment Type

Shared Query

Actions

No Data

Add New Tag

Tag Name: Flammable

Tag Description: Use with caution and follow procedures.

Assignment Type: Manual

Manual

Automatic

Add

Clear

Close

When tags are set up, the materials identifiable with tags will be shown in the materials table as shown in the example below.

Material Name	Auto Approval	Pha...	Current	Volume	DG	S1	S2	PKG	UN No	Material Tags	Added On
acetone					Not Applicable						
ACETONE 28/05/2024			0	L	No Data					Flammable X	06/01/2025 06:03:29
acetone 23/12/2022 04/01/2023	Conditional		0	L	3				1090	Flammable X	06/01/2025 06:06:23
ammonia					Not Applicable						
benzene					Not Applicable						
Benzenes 17/05/2024			0	L	No Data						06/01/2025 06:03:53
benzene 23/12/2022 06/01/2025	Conditional		0	L	3			II	1114	Flammable X	06/01/2025 06:05:50

Tags Display,
e.g.,
Flammable

Tags can also be associated with queries through the **Query Builder** mode in the search panel using the “Share” checkbox function. This feature allows users to query the database for materials also associated with specific tags for ease of identifying materials based on the criteria of the query.

Simple
Advanced
Query Builder

Own
Select Query...
Folder: Location X

Query Name:
Query:
Select...
+
☐ Query ingredients also

☐ Share
Save
Cancel

Share a
Query with
a Tag

2.1 Create a Manual Tag

The following exercise provides an example on how to add (create) a manual tag to identify flammable hazardous chemicals in a folder inventory.

Steps: Create a Manual Tag

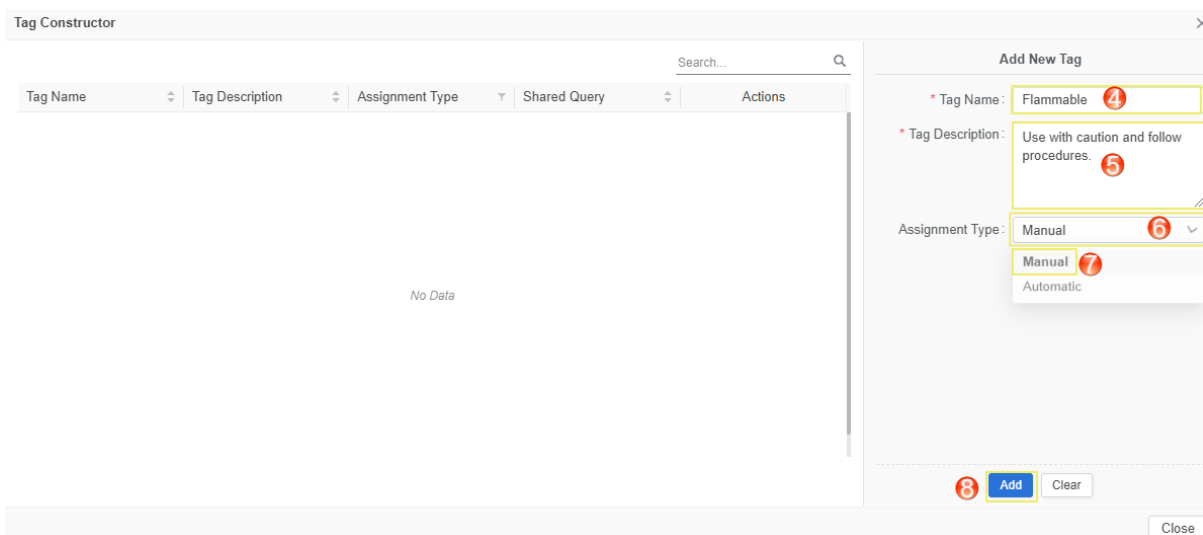
Home
Risk Assessments
Industrial Hygiene
SISOT
Label

Simple
Advanced
Query Builder

Full
Own
Type in material name, CAS No or CW No
Select Countries
Select Languages
Search for a folder...
Expand
Collapse
All materials for administrator
Area
Section
Location
Australia
Industry Hygiene Workplace
Storage

Material Name
Approval
Pha...
Current
Volume
DG
S1
S2
PKG
UN No
Material Tags

1. Open **Home** module.
2. Click on a **Folder** location to list materials.
3. Click the **Materials Tags Edit** icon to open the **Tag Constructor** window.
4. Type the name of the tag in the **Tag Name** in the tag constructor text field.
*Note that this field is required to be filled to save the tag.
5. Enter the Tag Description in the text field.
*Note that this field is required to be filled to save the tag.
6. Select the **Assignment Type** dropdown arrow to list options (Manual or Automatic).
7. Select the “**Manual**” assignment type of tag.
8. Click the **Add** button to save the entry record.



Tag Constructor

Search...

Tag Name	Tag Description	Assignment Type	Shared Query	Actions
No Data				

Add New Tag

* Tag Name:

* Tag Description:

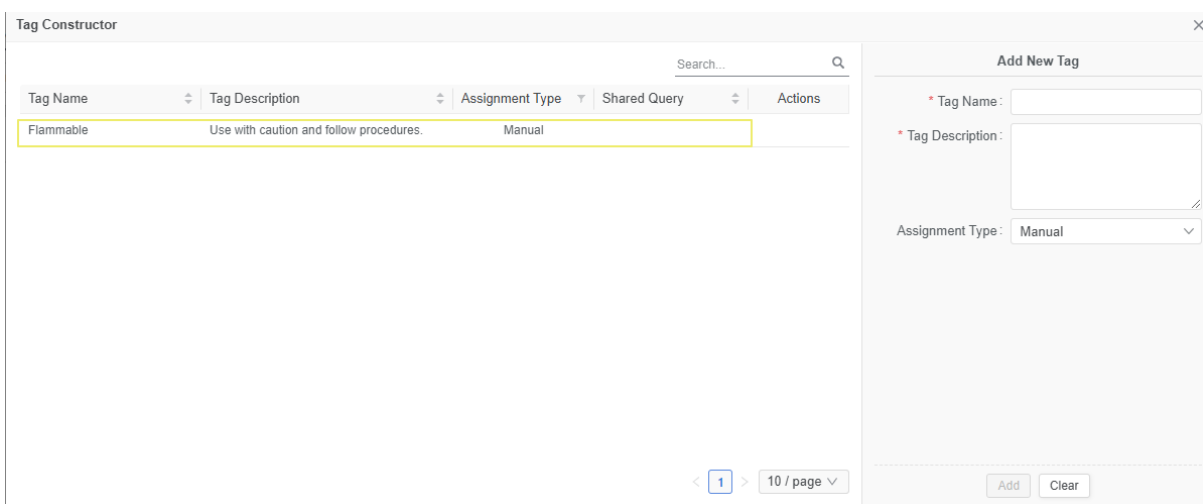
Assignment Type:

Manual
Automatic

Add Clear

Close

Tag Record Entry Display



Tag Constructor

Search...

Tag Name	Tag Description	Assignment Type	Shared Query	Actions
Flammable	Use with caution and follow procedures.	Manual		

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Add New Tag

* Tag Name:

* Tag Description:

Assignment Type:

Add Clear

2.1.1 PFAS Regulatory Query and Automatic Tagging

In the chemicals management space, there is an increase in attention on PFAS (Per-and Polyfluoroalkyl Substances) by regulators and stakeholders as this group of manufactured chemicals can be found in water, soil, air, food, homes or workplaces. PFAS related regulations in the USA provide the framework for hazardous and non-hazardous management of waste. PFAS Chemical Lists were developed by EPA and the international community to assist businesses and organisations to identify PFAS chemicals for compliance purposes.

Exposure to PFAS

Research has shown that people can be exposed to PFAS by:

- Working in occupations such as firefighting, chemical manufacturing and processing.
- Drinking water contaminated with PFAS.
- Consuming foods that may contain PFAS, including fish.

- Swallowing contaminated solid or dust.
- Using products made with PFAS or packaged in materials that contain PFAS.
- Breathing air that contains PFAS.

Health Effects of PFAS

Peer reviewed scientific studies show that exposure to certain levels of PFAS may result in:

- Reproductive effects in pregnant women.
- Development effects or delays in children.
- Reduced ability of the body's immune system to fight infections.
- Interference with the body's natural hormones.
- Increased cholesterol levels, risk of obesity.

The following exercise provides an exercise on how to add (create) an automatic tag to identify PFAS chemicals in a folder inventory. The information below will help build a query that will be associated with an automatic tag using the predefined items.

Query name	PFAS Chemical Query
Regulatory	Environment - PFAS
	Regulatory - PFAS
	Hazardous Materials - PFAS
Country	United States
Chemical Inventory	Folder location containing an inventory of chemicals
Tags	PFAS tag must be created as an automatic tag to easily identify any chemicals when using the search query.
Query Builder user attributes	Users must be permitted to create queries in query builder mode and set automatic tags.

Steps: Create a PFAS Regulatory Query to Identify PFAS Chemicals

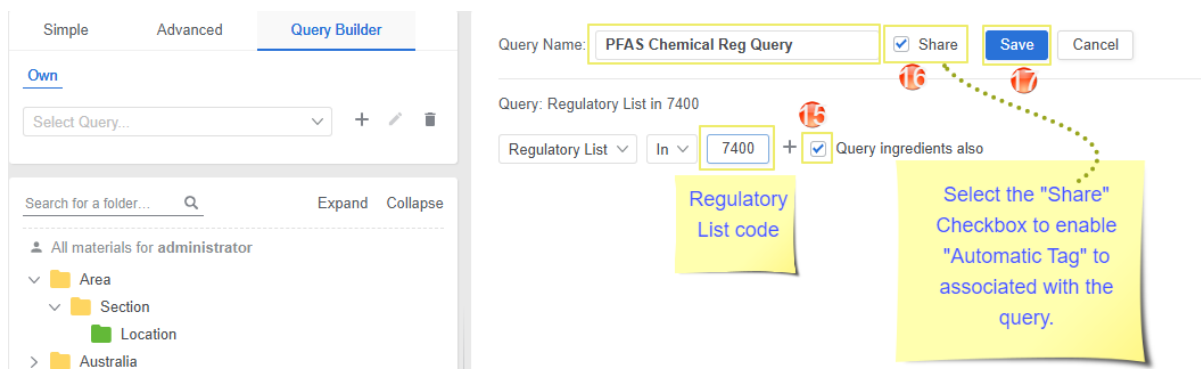
1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click the **Add** button  on the search panel to create a query.
4. Type the name of the query in the **Query Name** text field, e.g., PFAS Chemical Reg Query.
5. Click the **Search Parameter drop-down arrow** to list the search parameter options.
6. Select **Regulatory List**.
7. Click the **Operand** field drop-down arrow to select the string operand, e.g., In.
8. Press the **"Click to select data"** field to open the Regulatory Tree window.

1. Home icon, 2. Query Builder tab, 3. Plus icon for adding filters, 4. Query Name field, 5. Regulatory List dropdown, 6. Regulatory List selection, 7. In dropdown, 8. Click to select data button, 9. Filter by Country, 10. Filter by Region, 11. Type the Keyword, 12. Click the Apply button, 13. Select the relevant exposure limit regulatory list checkbox, 14. Click the Save button.

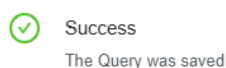
9. Filter by **Country**, e.g., United States.
10. Filter by **Region**, e.g., North America.
11. Type the **Keyword** to narrow the search, e.g., PFAS.
12. Click the **Apply** button.
13. Select the relevant exposure limit **regulatory list checkbox** from the results. Note the regulatory code gets displayed in the field.
14. Click the **Save** button  on the regulatory tree window.

9. United States of America, 10. North America, 11. PFAS, 12. Apply, 13. US EPA Master List of PFAS Substances, 14. Save button

15. (Optional) Click the **Query ingredients also checkbox** to include any ingredients in the query.
16. Select the **"Share"** checkbox to associate the query with the automatic tagging feature.
17. Click the **Save** button  to save the query.



A confirmation message displays successful operation.

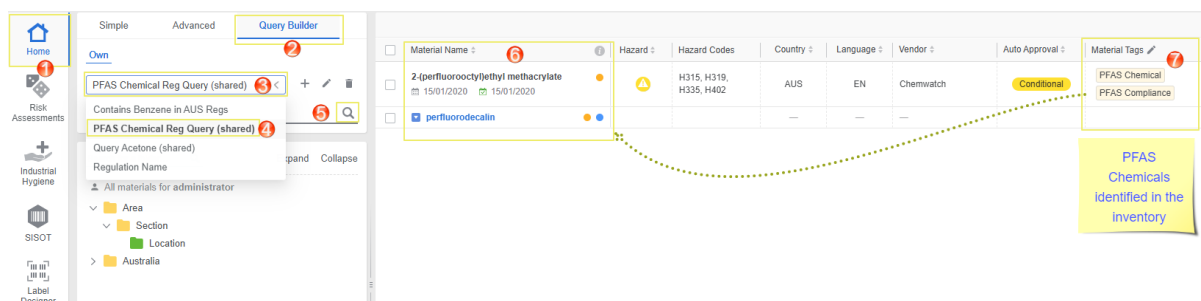


2.1.2 Search by Regulation Name Query to Find PFAS Chemicals

The steps below show how to use an existing search query to quickly find materials in your own inventory for PFAS chemicals. Note that the search query includes ingredients.

Steps: Search By Regulation Name by Query to Find PFAS Chemicals

1. Open **Home** module .
2. Click the **Query Builder** tab.
3. Click the **Query drop-down arrow** located on the query name text field.
4. Select the **Query Name**, e.g., PFAS Chemical Reg Query.
5. Click the **Magnifying Glass**  to search by query for PFAS chemicals.
6. Search results display the materials in your own inventory that meet the query criteria, in this case, PFAS chemicals.
7. The PFAS Compliance tag is also displayed automatically within the Material Tag Name column for each material row.

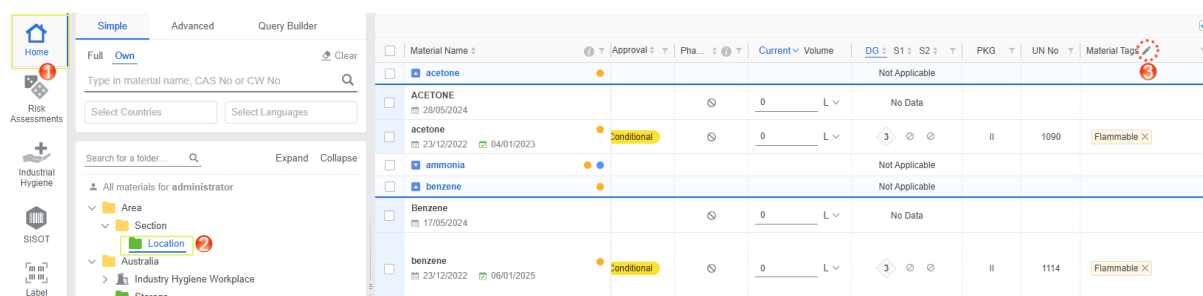


2.2 Create an Automatic Tag and Set a Query

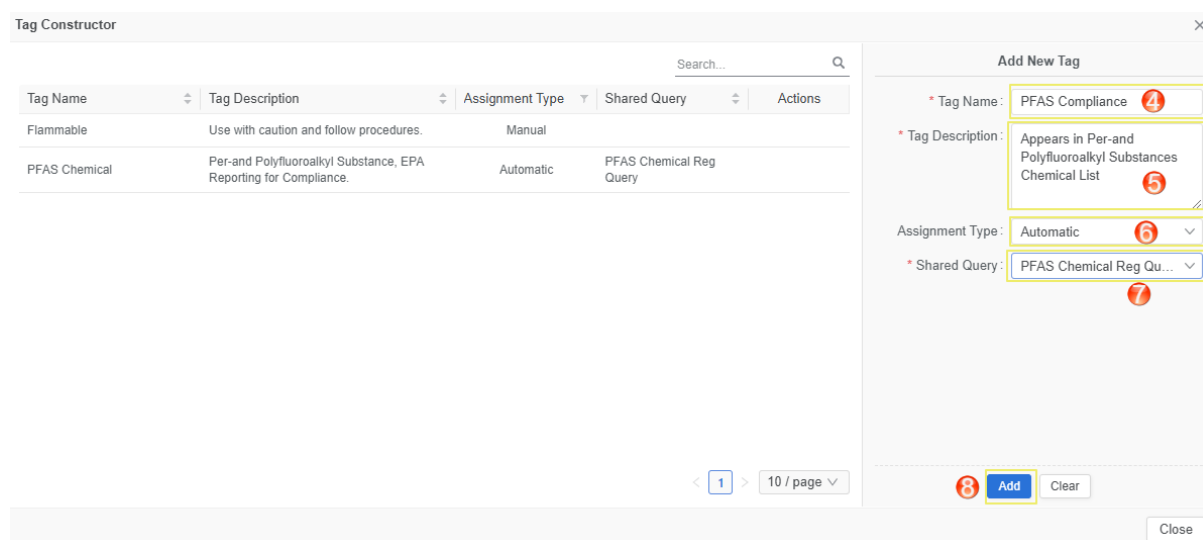
Automatic tags improve searchability and consistency in identifying specific materials in your own inventory based on predefined rules. Automatic tags can be shared with queries in Query builder mode to automatically tag materials based on a search criterion.

This feature helps users to categorize data efficiently without requiring any manual input, especially when handling with a large pool of data. The following exercise provides an example on how to add (create) an automatic tag and add a description of the tag.

Steps: Create an Automatic Tag



1. Open **Home** module .
2. Click on a **Folder** location to list materials.
3. Click the **Materials Tags Edit icon**  to open the **Tag Constructor** window.
4. Type the name of the tag in the **Tag Name** in the tag constructor text field.
**Note that this field is required to be filled to save the tag.*
5. Enter the **Tag Description** in the text field, e.g. PFAS Chemical, EPA Reporting. **Note that this field is required to be filled to save the tag.*
6. Select the **Assignment Type** dropdown arrow to list options (Manual or Automatic) and select the **"Automatic"** assignment type of tag.
7. Select the **"Shared Query"** name. **Note that this field is required.*
8. Click the **Add** button  to save the entry record.



Tag Record Entry Display

Tag Constructor

Search...

Q

Tag Name	Tag Description	Assignment Type	Shared Query	Actions
Flammable	Use with caution and follow procedures.	Manual		
PFAS Chemical	Per-and Polyfluoroalkyl Substance, EPA Reporting for Compliance.	Automatic	PFAS Chemical Reg Query	
PFAS Compliance	Appears in Per-and Polyfluoroalkyl Substances Chemical List	Automatic	PFAS Chemical Reg Query	

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Add New Tag

* Tag Name: PFAS Compliance

* Tag Description: Appears in Per-and Polyfluoroalkyl Substances Chemical List

Assignment Type: Manual

Add

Clear

Close

Appendix

Summary Structure of SDS

Comprehensive SDS structure requirements are available in the code of practice for the preparation of 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 to the product in question • Poisons Schedule number
16. Other information	• Date of preparation or review • Key abbreviations or acronyms used

GHS Pictogram 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
 Flame	Flammables Self-reactives Pyrophorics Self-heating Emits flammable gas in contact with water Organic peroxides	     	Flammability (Liquid, Solid or Gas) Pyrophoric, Emit Flammable Gas Organic Peroxide
 Flame over circle	Oxidisers	 	Oxidiser Oxidising gas
 Gas Cylinder	Gases under pressure	   	Non-toxic non-flammable gas, flammable gas, oxidising gas, toxic gas

 Skull and crossbones	Acute toxicity	 	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 to metals
 Environment	Aquatic toxicity. Not covered within the scope of workplace hazardous chemicals requirements		Environmental hazard
No equivalent hazard pictogram			Miscellaneous dangerous goods
Not covered within the scope of workplace hazardous chemicals requirements			Infectious

Not covered within the scope of workplace hazardous chemicals requirements		Radioactive
--	---	-------------

NFPA Diamonds



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 SDS will depict the applicable NFPA diamond where applicable. Note that the SDS Settings panel will have to be checked/marked for this diamond or graphic to show in the SDS.

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) 4 Very short exposure could cause death or major residual injury (e.g., hydrogen cyanide, phosphine, carbon monoxide, sarin)	3 4	Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions (e.g., gasoline). Liquids have a flash point below 23°C (73°F) and have 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 4	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) Readily capable of detonation or explosive decomposition at normal temperatures and pressures (e.g., nitroglycerin, chlorine azide, chlorine dioxide)

Chemwatch Elearning

Chemwatch provides a training library as a gateway to learning more about the software application through our learning site. Use the link provided to access the elearning quick start guide, products, translations, and courses.

QUICK START GUIDE	PRODUCTS	TRANSLATIONS	COURSES
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**IT'S NOT THE HAZARD
IT'S THE RISK!**

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