

Introduction

The Health, Safety and Environment Department (HSE) has made available to all Hopkins students, faculty, and employees an online Safety Data Sheet (SDS) database – ChemWatch. ChemWatch provides a database of both vendor SDS and independently researched ChemWatch SDS, in addition to its services including chemical management, risk assessment, and regulatory databases.

How to access:

1. Go to <http://www.hopkinsmedicine.org/hse>
2. Click on “MSDS/SDS Lookup” from the quick link menu.
3. Under “Quick Links to MSDS/SDS Databases”, look for ChemWatch.
4. Click on the first link: <http://jr.chemwatch.net/chemwatch.web/account/autologinbyip/>

Note: to access an older version of this application ChemWatch Gold 3, click [here](#).

1. Quick Start

Step 1

1. Select “Materials”

2. Select the desired type of report

3. Enter the name of the chemical

4. Select “Full”

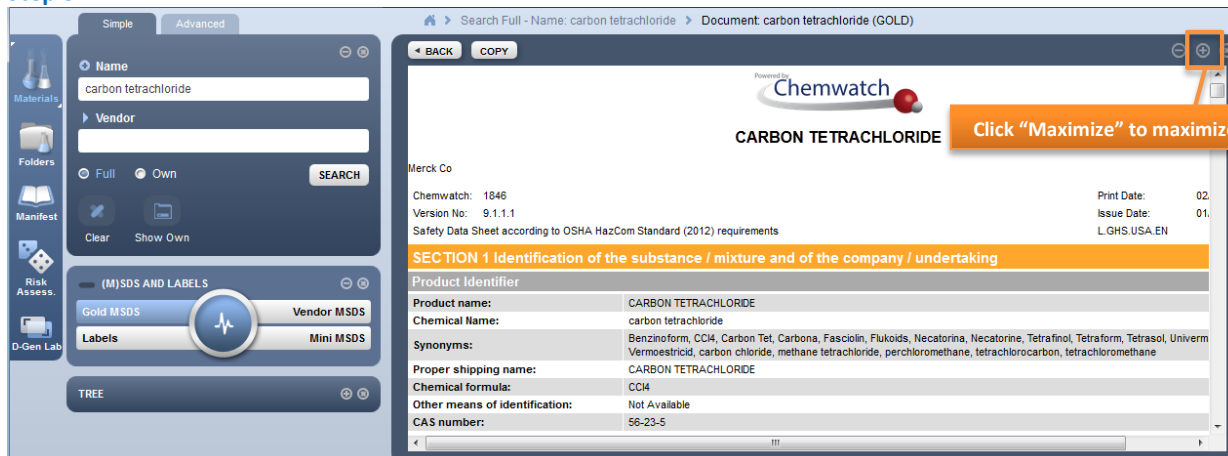
5. Click “SEARCH”

Step 2

6. Select the correct chemical

GROUP	Track	Part No.	Material Name	CwNumber	Has Gold MSDS	Synonym	Preferred names
			carbon tetrachloride	1846	Has Gold MSDS		
			Merck Carbon Tetrachloride for Spectroscopy Uvasol			CARBON TETRACHLORIDE	

Step 3



Search Full - Name: carbon tetrachloride > Document: carbon tetrachloride (GOLD)

Merck Co

Chemwatch: 1846
Version No: 9.1.1.1
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Print Date: 02
Issue Date: 01
L.GHS USA EN

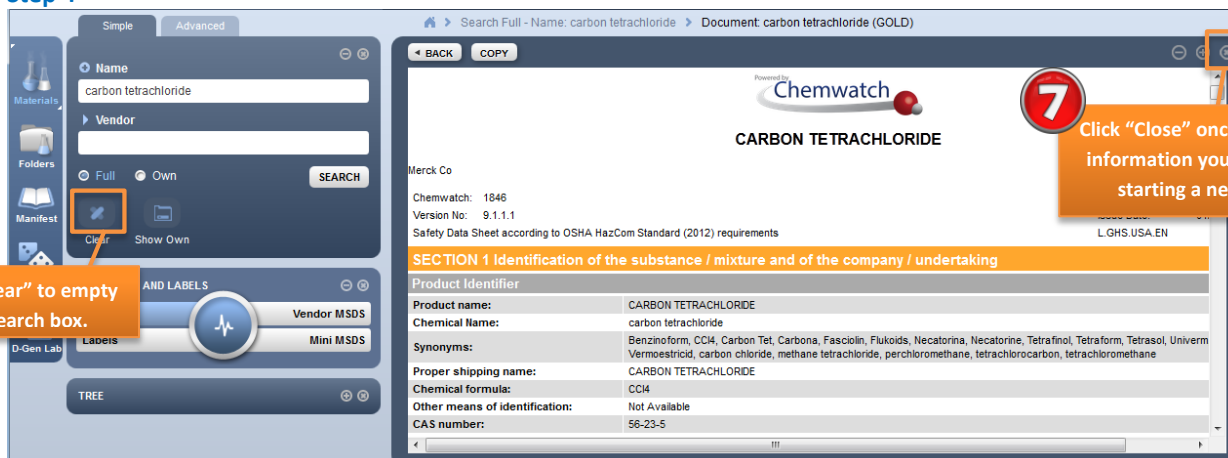
SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name:	CARBON TETRACHLORIDE
Chemical Name:	carbon tetrachloride
Synonyms:	Benzoinform, CCl ₄ , Carbon Tet, Carbona, Fasciolin, Flukoids, Necatorina, Necatorine, Tetrafinol, Tetraform, Tetrasol, Univerm, Vermoestricid, carbon chloride, methane tetrachloride, perchloromethane, tetrachlorocarbon, tetrachloromethane
Proper shipping name:	CARBON TETRACHLORIDE
Chemical formula:	CCl ₄
Other means of identification:	Not Available
CAS number:	56-23-5

Click "Maximize" to maximize SDS screen.

Step 4



Search Full - Name: carbon tetrachloride > Document: carbon tetrachloride (GOLD)

Merck Co

Chemwatch: 1846
Version No: 9.1.1.1
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

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Proper shipping name:	CARBON TETRACHLORIDE
Chemical formula:	CCl ₄
Other means of identification:	Not Available
CAS number:	56-23-5

Click "Clear" to empty the search box.

Click "Close" once you find the information you need before starting a new search.

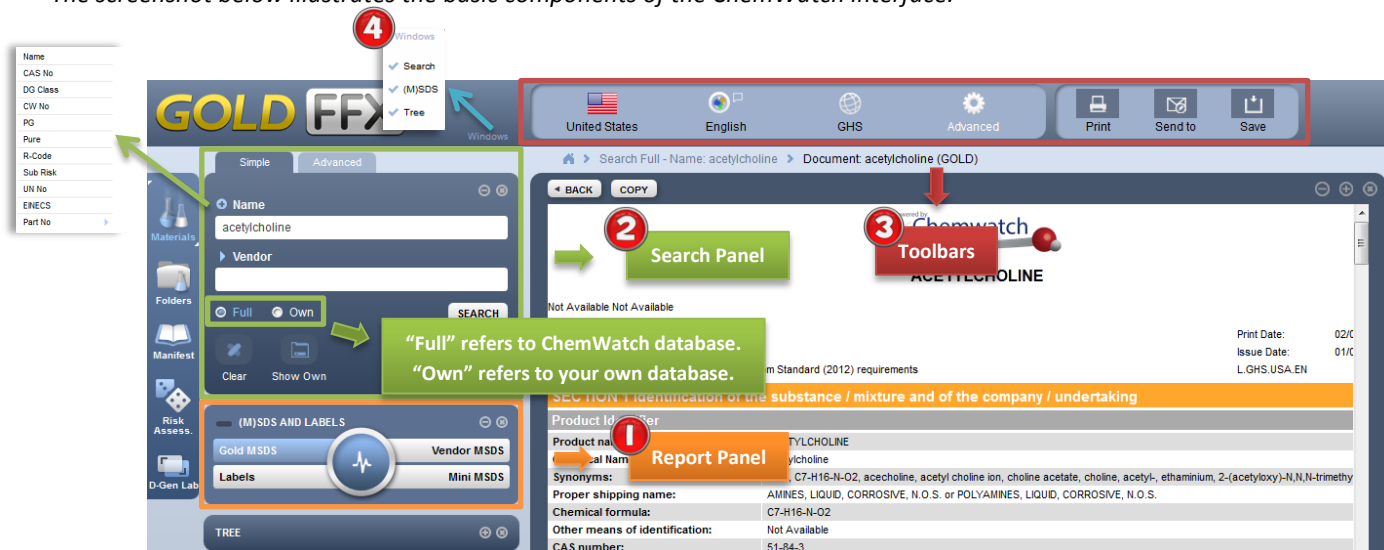
2. Overview

GoldFFX consists of seven main user interface (UI) modules. For the purpose of this tutorial, you will only use the Materials module. The new user interface is now available in 40 different languages. You can easily change the language by selecting "UI Language".

2.1 Overview of the Materials Module

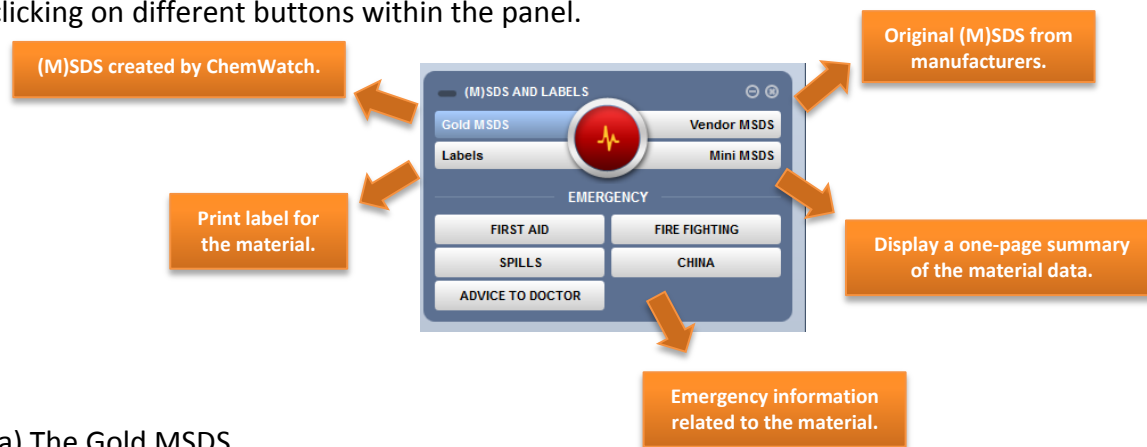
The Materials Module consists of several elements:

The screenshot below illustrates the basic components of the ChemWatch interface.



2.1.1 Report Panel

Report panel allows you to determine the types of data, information, and report to display by clicking on different buttons within the panel.



(a) The Gold MSDS

The Gold MSDS are created by ChemWatch. A standard SDS consists of 16 different sections.

Note: a Gold Long/Short option is no longer available for GOLD FFX. To view a briefer version of (M)SDS, try searching with the Mini MSDS.

(b) The Vendors MSDS

The Vendors MSDS are original safety data sheets provided by the manufacturers.

(i) Sorting

A search for Vendors MSDS of a chemical can give you many results. Sorting based on Name, Vendor, Type, Language, Country, Source Type, and Issue Date allows you to select for the most appropriate content.

Source Type

Primary refers to SDSs directly from the manufacturers.

Secondary refers to SDSs from other sources such as internet.

Tips: If you cannot locate the desired information in the GOLD MSDSs (because they are outdated etc.), check the Vendors MSDS. Sorting by Issued Date allows you to quickly locate the most recent MSDSs either from manufacturers or websites.

The screenshot shows the ChemWatch GOLD FFX interface. On the left is a search panel with fields for Name (carbon tetrachloride) and Vendor, and buttons for Search, Clear, and Show Own. Below this are tabs for (M)SDS AND LABELS, with Gold MSDS selected. On the right is a table of search results for carbon tetrachloride. The table has columns: Track, Part N, Name, Vendor, Type, Language, Country, Source, and Issue Date. The results are sorted by Source Type. Annotations include: 'Sort by Source Type' pointing to the Source column header; 'Sort by Issue Date allows you to find the most recent SDS.' pointing to the Issue Date column header; and 'Choose how many results you want to display on each page' pointing to the results per page dropdown menu (set to 10).

Track	Part N	Name	Vendor	Type	Language	Country	Source	Issue Date
		carbon tetrachloride	Air Liquide	MSDS	English	United States	Secondary	28/04/2011
		carbon tetrachloride	Ashland	MSDS	English	United States	Secondary	20/10/1991
		Carbon Tetrachloride	USP	MSDS	English	United States	Primary	03/08/2008
		Carbon Tetrachloride	Avantor Performance Materials h	MSDS	English	United States	Secondary	07/12/1996
		CARBON TETRACHLORIDE	Avantor Performance Materials h	MSDS	English	United States	Primary	07/12/1996
		Carbon tetrachloride	Spectrum Chemical Mfg	MSDS	English	United States	Primary	06/01/2009
		CARBON TETRACHLORIDE	Scott Medical Products	MSDS	English	United States	Secondary	26/02/2007

(c) The Mini MSDS

The Mini MSDS provides a one-page summary about the chemical. The Mini MSDS is available in more than 30 languages.

Tips: Move your mouse over the pictogram to see a description of the icon.

(d) Emergency

The Emergency MSDS provides emergency information related to the chemical. The data is divided into five different sections: First Aid, Spills, Fire Fighting, Advice to Doctor, and Chemical Incident Advisory (ChInA) codes.

(e) Labels

The Labels MSDS provides 30 different printable templates of chemical labels.

(For instruction on how to print, click [here](#).)

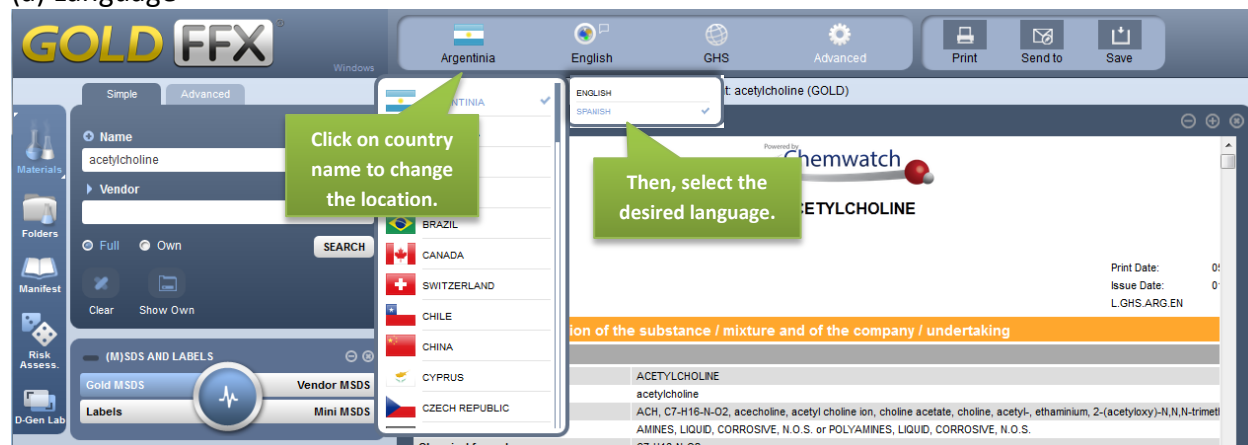
2 2.1.2 Search Panel

Search Panel allows search by product name, synonym, common name, chemical formula, trade name, or manufacturer's name.

3 2.1.3 Toolbars

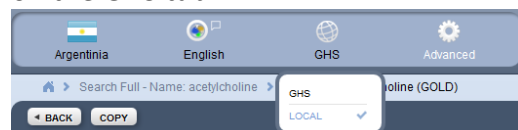
The toolbars provides language and format options. A variety of languages is available. The GHS tab also allows display in either Local or GHS (“Globally Harmonized System”) format. The Advanced tab provides other options include check boxes to select fields to display in the output report screen, such as NFPA (“National Fire Protection Association”) Diamond and WHMIS (“Workplace Hazardous Materials Information System”) classification.

(a) Language

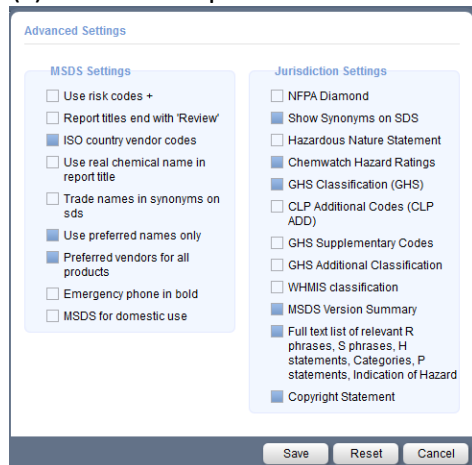


(b) GHS (“Globally Harmonized System”) Format

GHS format meets the legal requirement on compliance and standards of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) originally developed by the United Nations. “Local Format” is the old regulation format. In ChemWatch GOLD FFX, GHS format is the default option. You can easily switch back to the old regulation format by clicking on the GHS tab.



(c) Advanced Option



Advanced Settings allow you to display or hide fields in the output report screen. For example, you can choose to display NFPA (“National Fire Protection Association”) Diamond and WHMIS (“Workplace Hazardous Materials Information System”) classification in the SDS screen.

Once all the options are chosen, click “SAVE” and the SDS will automatically display in the selected format.

4 2.1.4 Windows

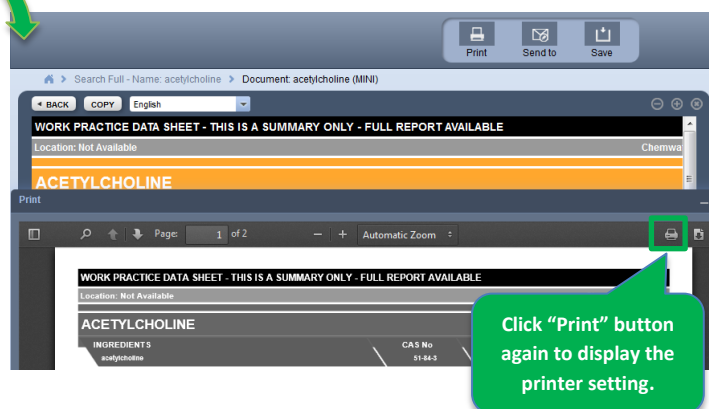
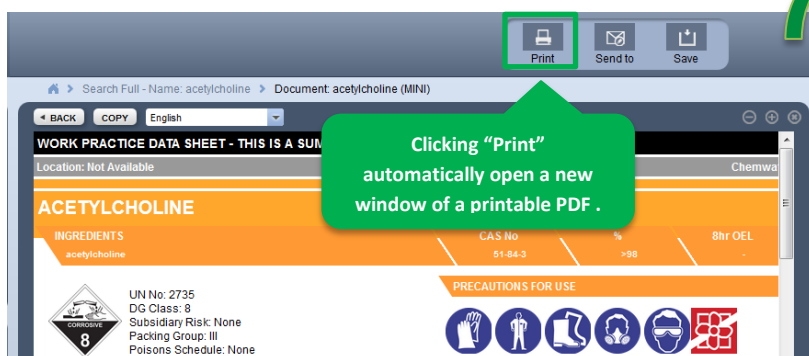


The search/(M)SDS/Tree windows can be maximized/minimized or closed for your convenience.

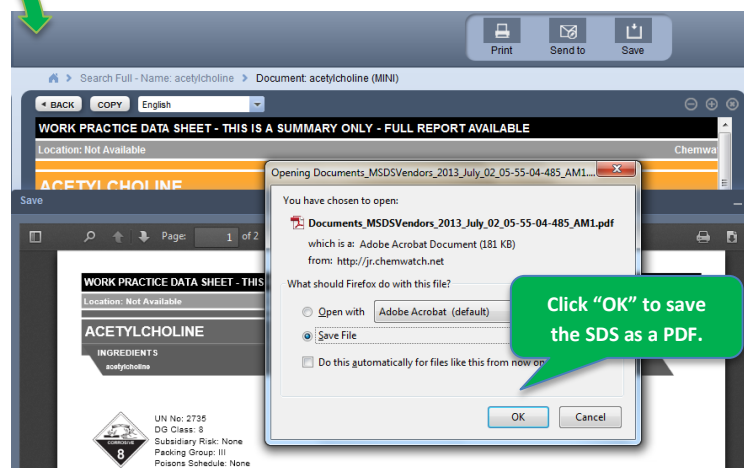
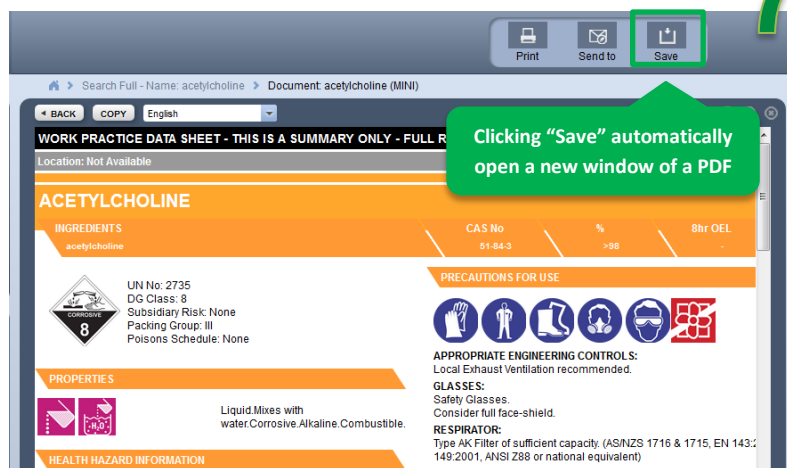
You can restore the closed windows by clicking “Windows” and then select the desired window.

3. How to ...?

3.1 How to print?



3.2. How to save as a PDF?



4. FAQs

4.1 *Why is there a log in screen when I try to access ChemWatch from home?*

ChemWatch recognizes the university's IP address and thus no log-in is required when you are connected to the Hopkins network. If you need to use ChemWatch from off-campus, JHConnect provides access to Hopkins Computing Network resources for remote users. Click [here](#) for more information.

4.2 *What is the difference between "Full" and "Own" in the search panel?*

"Full" comprises the entire ChemWatch database while "Own" display only your registered chemicals. For the purpose of this tutorial, you should ALWAYS use "Full".

4.3 *What is the difference between "Local Format" and "GHS Format"? Which one should I use?*

The Occupational Safety and Health Administration (OSHA) has revised the Hazard Communication Standard (HCS) to align with the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS). "Local Format" is the old regulation format. It is highly recommended to use the GHS format. Yet, both formats are legal until the full implementation of regulation in 2016. For more information on GHS, click [here](#).

4.4 *What other information can I get from ChemWatch GoldFFX?*

ChemWatch provides other useful information that oftentimes cannot be found on the label of a chemical package. For example, ChemWatch tells you PVC gloves are much more suitable for handling ethanol than nitrile gloves.

Conclusion

At the end of this tutorial, you should be able to pull out various SDSs according to your need. You should also be able to identify the hazardous properties of chemicals that may pose a health, physical or environmental hazard during normal handling or use and to convey information about these hazards using ChemWatch. When in doubt, always use the SDSs as sources of information about hazards and to obtain advice on safety precautions. SDSs are in use globally. So it is useful to have an understanding of the SDS content and format in order to take appropriate action in response to chemical hazards.

Appendix

Example: Gold MSDS for acetylcholine is shown below.

Simple Advanced

Search Full - Name: acetylcholine Document: acetylcholine (GOLD)

← BACK COPY

Powered by Chemwatch

ACETYLCHOLINE

Not Available Not Available

Chemwatch: 16622-1
Version No: 5.1.1.1
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Print Date: 02
Issue Date: 01
L.GHS,USA,EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name:	ACETYLCHOLINE
Chemical Name:	acetylcholine
Synonyms:	ACH, C7-H16-N-O2, acecholine, acetyl choline ion, choline acetate, choline, acetyl-, ethanium, 2-(acetyloxy)-N,N,N-trimeth
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
Chemical formula:	C7-H16-N-O2
Other means of identification:	Not Available
CAS number:	51-84-3

Relevant identified uses of the substance or mixture and uses advised against

Example: Vendor MSDS for acetylcholine is shown below.

Simple Advanced

Search Full - Name: acetylcholine Material: acetylcholine Document: acetylcholine (sigma-aldrich)

← BACK

Page: 1 of 5 Automatic Zoom

SIGMA-ALDRICH

MATERIAL SAFETY DATA SHEET

Date Printed: 01/22/2009
Date Updated: 01/31/2006
Version 1.3

Section 1 - Product and Company Information

Product Name	ACETYLCHOLINE BROMIDE
Product Number	A6500
Brand	SIGMA
Company	Sigma-Aldrich
Address	3050 Spruce Street SAINT LOUIS MO 63103 US
Technical Phone:	800-325-5832
Fax:	800-325-5052

Example: Mini MSDS for acetylcholine is shown below.

Simple Advanced

Search Full - Name: acetylcholine Document: acetylcholine (MINI)

← BACK COPY English

WORK PRACTICE DATA SHEET - THIS IS A SUMMARY ONLY - FULL REPORT AVAILABLE

Location: Not Available

Chemwatch

ACETYLCHOLINE

INGREDIENTS	CAS No	%	8hr OEL
acetylcholine	51-84-3	>98	-

UN No: 2735
DG Class: 8
Subsidiary Risk: None
Packing Group: III
Poisons Schedule: None

PRECAUTIONS FOR USE

APPROPRIATE ENGINEERING CONTROLS:
Local Exhaust Ventilation recommended.

GLASSES:
Safety Glasses.
Consider full face-shield.

RESPIRATOR:
Type AK Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2014:2001, ANSI Z88 or national equivalent)

PROPERTIES

Liquid.Mixes with water.Corrosive.Alkaline.Combustible.

HEALTH HAZARD INFORMATION

Example: Emergency (Fire Fighting) for acetylcholine is shown below.

The screenshot displays the ChemWatch GOLD FFX interface. On the left is a sidebar with navigation icons for Materials, Folders, Manifest, Risk Assess., and D-Gen Lab. The main content area is titled 'Simple' and 'Advanced'. It shows a search for 'acetylcholine' with a 'SEARCH' button. Below the search bar are tabs for 'Full' and 'Own', and a 'Show Own' button. A red circular icon with a white lightning bolt is visible. The 'EMERGENCY' section is active, showing buttons for 'FIRST AID', 'FIRE FIGHTING', 'SPILLS', 'CHINA', and 'ADVICE TO DOCTOR'. The 'FIRE FIGHTING' button is highlighted. The main content area displays the following information:

- Chemwatch: 16622-1
- Water spray/ fog.
- ACETYLCHOLINE
- UN No: 2735
- Hazchem Code: 2X
- DG Class: 8
- Subsidiary Risk: None
- Packing Group: III
- Poisons Schedule: Not Available
- Properties: Liquid.
- Mixes with water.
- Corrosive.
- Alkaline.

Example: Labels for acetylcholine is shown below.

The screenshot displays the ChemWatch GOLD FFX interface. On the left is a sidebar with navigation icons for Materials, Folders, Manifest, Risk Assess., and D-Gen Lab. The main content area is titled 'Simple' and 'Advanced'. It shows a search for 'acetylcholine' with a 'SEARCH' button. Below the search bar are tabs for 'Full' and 'Own', and a 'Show Own' button. A red circular icon with a white lightning bolt is visible. The 'LABELS' section is active, showing buttons for 'TREE' and 'Labels'. The 'Labels' button is highlighted. The main content area displays the following information:

- ACETYLCHOLINE
- INGREDIENTS: acetylcholine, 51-84-3, 98
- Hazard Codes/Statements: H314 - Causes severe skin burns and eye damage; H318 - Causes serious eye damage; H290 - May be corrosive to metals
- Precautionary statement(s) - Prevention: Do not breathe dust/fume/gas/mist/vapours/spray; Wash ... thoroughly after handling; Wear protective gloves/protective clothing/eye protection/face protection; Keep only in original container.