

Using the EPA Databases to find the HSNO Classification for a substance

Use this sheet to find classifications for single substances (not mixtures) or a dilution
If you have a substance or products that is a mixture, you will need to get the safety data sheet from your supplier.

The databases

Controls Database – shows for approved ‘single substances’ the classification and controls that apply and any changes to those controls –

<http://www.epa.govt.nz/search-databases/Pages/controls-search.aspx>

Chemical Classification Information Database – shows for approved ‘single substances’ the HSNO classification, and the data that was used in determining the classification –

<http://www.epa.govt.nz/search-databases/Pages/HSNO-CCID.aspx>

Both databases work pretty much the same way, so we will look at examples of each.

Example 1 – Searching by name - LPG

Example 2 – Searching by name with wildcards – ethanol

Example 3 – Using the CAS number

Example 4 – doing the same search in the controls database



Example 1 – Searching by name - LPG

- Change the search type from CAS number to Name/Synonym

- Type in the name you want to search for, in this case LPG and click 'search'. A list of results appears.

CAS Number	Synonym / Name
68476-85-7	Petroleum gas liquefied / LPG (liquified petroleum gas)
68476-85-7	Petroleum Gases, liquefied / LPG (liquified petroleum gas)

- Clicking on one of the results (or in this case either of the results) gives us the following information, including the HSNO classification of 2.1.1A, and the data that was used to classify it.

LPG (liquified petroleum gas)

Cas Number:	68476-85-7
Synonyms:	Fuels, liquefied petroleum gas, L.P.G., Liquid petroleum gas, LPG, Petroleum gas liquefied, Petroleum Gases, liquefied
Molecular Weight:	
Relative Density:	0.506-0.583
Water Solubility (mg/l):	24-61
Approval Number:	HSR001009
UN Class:	Class 2.1
UN Number:	1075

Classification	
2.1.1A	Flammable Gases : high hazard

Classification Data	
2.1.1A	UN Number: 1075 , UN Class: Class 2.1
	Upper Flammability Limit : % vol in air
	Lower Flammability Limit : % vol in air

Example 2 – Searching by name with wildcards – ethanol

In most cases the description of the substance in the database is quite long, so we can use '%' as a wildcard to get the best results

- If we search only for ethanol, you end up straight at the entry for ethanol

Search the CCID

▼

Search
?

Ethanol

Cas Number:	64-17-5
Synonyms:	Absolute ethanol, Alcohol, Ethyl alcohol, Ethyl hydrate, Ethyl hydroxide, Methylcarbinol
Molecular Weight:	46.07
Relative Density:	
Water Solubility (mg/l):	
Approval Number:	HSR001144
UN Class:	Class 3.0; PG II
UN Number:	1170

Classification	
3.1B	Flammable Liquids: high hazard
6.4A	Irritating to the eye

- However if we use the wildcard and search for ethanol%, we get many more results

Search the CCID

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Search
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CAS Number	Synonym / Name
112-34-5	Ethanol, 2-(2-butoxyethoxy)-
64-17-5	Ethanol
111-76-2	Ethanol, 2-butoxy-
111-76-2	Ethanol, 2-butoxy- / Ethanol, 2-butoxy-
112-07-2	Ethanol, 2-butoxy-, acetate
112-07-2	Ethanol, 2-butoxy-, acetate / Ethanol, 2-butoxy-, acetate
110-80-5	Ethanol, 2-ethoxy-
111-15-9	Ethanol, 2-ethoxy-, acetate
111-15-9	Ethanol, 2-ethoxy-, acetate / Ethanol, 2-ethoxy-, acetate
109-59-1	Ethanol, 2-(1-methylethoxy)-
109-59-1	Ethanol, 2-(1-methylethoxy)- / Ethanol, 2-(1-methylethoxy)-

Example 3 – Using the CAS number

As you might know there can be several different names for the same chemical. Using the CAS number (a number that is unique to a given chemical) helps cut down on errors. You can find the CAS number on the safety data sheet, in section 3. The example below is from a Spirits of Salts (Hydrochloric Acid) SDS.

3. COMPOSITION : Information on Ingredients

Chemical Ingredient	CAS No.	Proportion (%w/v)
Hydrogen chloride	7647-01-0	37 - 39
Water	7732-18-5	balance

- Enter the CAS number in the search, and in this example we get a result list that includes hydrogen chloride, and a number of concentrations of hydrochloric acid.

Search the CCID

▼

Search
?

CAS Number	Synonym / Name
7647-01-0	Hydrochloric acid, >25% aqueous solution
7647-01-0	Hydrochloric acid, 0.5-2% aqueous solution
7647-01-0	Hydrochloric acid, >10-25% aqueous solution
7647-01-0	Hydrochloric acid, >2-10% aqueous solution
7647-01-0	Hydrogen chloride

- As the SDS says there is 37-39% in the product, we'll look at the result for Hydrochloric acid, >25%

Hydrochloric acid, >25% aqueous solution

Cas Number:	7647-01-0
Synonyms:	Chlorohydric acid, Hydrochloric acid, Hydrogen chloride, Muriatic acid
Molecular Weight:	36.46
Relative Density:	1.10
Water Solubility (mg/l):	miscible
Approval Number:	HSR001557
UN Class:	8; PG II,III
UN Number:	

Classification		
6.1B	(inhalation)	Acutely toxic
6.1D	(oral)	Acutely toxic
6.1D	(dermal)	Acutely toxic
8.1A		Corrosive to metals
8.2B		Corrosive to dermal tissue
8.3A		Corrosive to ocular tissue
9.1D	(fish)	Slightly harmful in the aquatic environment or are otherwise designed for biocidal action
9.1D	(crustacean)	Slightly harmful in the aquatic environment or are otherwise designed for biocidal action
9.3C		Harmful to terrestrial vertebrates

Example 4 – doing the same search in the controls database

Search the Controls for Approved Hazardous Substances database

<input style="width: 95%; border: none;" type="text" value="CAS Number"/>	▼	
7647-01-0		<input style="background-color: #0070C0; color: white; padding: 5px 15px; border: none;" type="button" value="Search"/> <input style="background-color: #ccc; border: none; border-radius: 50%; width: 20px; height: 20px; text-align: center; margin-left: 10px;" type="button" value="?"/>

CAS Number	Synonym / Name
7647-01-0	Hydrochloric acid, >10-25% aqueous solution
7647-01-0	Hydrochloric acid, >25% aqueous solution
7647-01-0	Hydrochloric acid, 0.5-2% aqueous solution
7647-01-0	Hydrochloric acid, >2-10% aqueous solution
7647-01-0	Hydrogen chloride

HSNO Controls for Hydrochloric acid, >25% aqueous solution

Substance Description:

CAS Number: 7647-01-0

Synonyms: Chlorohydric acid, Hydrochloric acid, Hydrogen chloride, Muriatic acid

Approval Number: HSR001557

UN Number:

The relevant HSNO controls are listed below. Where a control has been varied, the change is shown to the right of the control.

(All) = overall classification for that endpoint, (O) = oral exposure route, (D) = dermal exposure route, (I) = inhalation exposure route, (A) = algae, (C) = crustacean, (F) = fish

Hazard Classifications

6.1B (All), 6.1B (I), 6.1D (D), 6.1D (O), 8.1A, 8.2B, 8.3A, 9.1D (All), 9.1D (C), 9.1D (F), 9.3C

- The classification listing in the controls database is easier to copy & paste if you want to do so.