

# Cyclohexanol

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Cyclohexanol
<b>Other Means of Identification</b>	Cyclohexyl alcohol, Hydrophenol
<b>Product Code(s)</b>	CY4610
<b>Product Family</b>	Organic solution
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	1478

## SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

### Classification

Flammable liquid - Category 4; Acute toxicity (Oral) - Category 4; Acute toxicity (Inhalation) - Category 4; Eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 3

### Label Elements



Signal Word:  
Warning

### Hazard Statement(s):

Combustible liquid.  
Causes serious eye irritation.  
May cause respiratory irritation.

### Precautionary Statement(s):

#### Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Wash hands and skin thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.

#### Response:

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IF ON SKIN: Wash with plenty of water.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Call a POISON CENTRE or doctor if you feel unwell.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

**Disposal:**

Dispose of contents and container in accordance with local, regional, national and international regulations.

**Other Hazards**

Harmful to aquatic life.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Cyclohexanol	108-93-0	> 98	Cyclohexyl alcohol, Hydrophenol	

### SECTION 4. FIRST-AID MEASURES

**First-aid Measures**

**Inhalation**

Remove source of exposure or move to fresh air. Seek immediate medical attention.

**Skin Contact**

Rinse with lukewarm, gently flowing water for 5 minutes. If skin irritation occurs, get medical advice or attention.

**Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

**Ingestion**

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

**First-aid Comments**

Provide general supportive measures (comfort, warmth, rest). Do not leave the victim unattended. All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace.

**Most Important Symptoms and Effects, Acute and Delayed**

None known.

**Immediate Medical Attention and Special Treatment**

**Special Instructions**

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media**

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Special "alcohol resistant fire-fighting foams".

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## Unsuitable Extinguishing Media

None known.

## Specific Hazards Arising from the Product

Combustible liquid. Can ignite if heated. Releases vapour that can form explosive mixture with air at or above the flash point. Closed containers may rupture violently when heated releasing contents. Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; toxic chemicals.

## Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. Knock down vapours or gases with water fog or fine water spray. Use water spray to dilute spills to non-flammable mixtures. Use water spray to flush spills away from ignition sources. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Remove or isolate incompatible materials as well as other hazardous materials. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Notify government occupational health and safety and environmental authorities.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

### Methods and Materials for Containment and Cleaning Up

Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area.

Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Only use where there is adequate ventilation. Avoid generating vapours or mists. Keep smallest practical amount in work area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Never return unused or contaminated product to its original container. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

### Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, clear of combustible and flammable materials (e.g. old rags, cardboard). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in the original, labelled, shipping container.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Cyclohexanol	50 ppm Skin		50 ppm			

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## Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

## Individual Protection Measures

### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: butyl rubber, neoprene rubber, nitrile rubber, Viton®, Viton®/butyl rubber, Barrier® (PE/PA/PE), Frontline® 500.

The following materials should NOT be used: natural rubber.

### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

<b>Appearance</b>	Light yellow liquid. Absorbs moisture from the air.
<b>Odour</b>	Not available
<b>Odour Threshold</b>	0.058 - 0.16 ppm (detection)
<b>pH</b>	Not available
<b>Melting Point/Freezing Point</b>	25.15 °C (77.27 °F) (melting); 25.15 °C (77.27 °F) (freezing)
<b>Initial Boiling Point/Range</b>	161 °C (322 °F)
<b>Flash Point</b>	68 °C (154 °F) (closed cup)
<b>Evaporation Rate</b>	0.05 - 0.08 (n-butyl acetate = 1)
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper/Lower Flammability or Explosive Limit</b>	9.00 - 12.25% (upper); 1.00 - 1.25% (lower)
<b>Vapour Pressure</b>	0.13 kPa (0.98 mm Hg)
<b>Vapour Density (air = 1)</b>	3.45
<b>Relative Density (water = 1)</b>	0.949 - 0.962 at 20 °C
<b>Solubility</b>	Moderately soluble in water; Highly soluble in common organic solvents.
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	1.23
<b>Auto-ignition Temperature</b>	300 °C (572 °F)
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic); 52.7 mPa.s at 25 °C (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid
<b>Molecular Weight</b>	100.16

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

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None known.

**Chemical Stability**

Normally stable.

**Possibility of Hazardous Reactions**

Hazardous polymerization does not occur.

**Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 68.0 °C (154.4 °F)

**Incompatible Materials**

Oxygen, strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide), strong oxidizing agents (e.g. perchloric acid), halogens (e.g. chlorine).

**Hazardous Decomposition Products**

Very toxic carbon monoxide, carbon dioxide.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Cyclohexanol	> 3.63 mg/L (rat) (4-hour exposure)	1400-2060 (rat)	794 (rabbit)

**Skin Corrosion/Irritation**

Animal tests show mild irritation.

**Serious Eye Damage/Irritation**

Moderate to severe irritant.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**

May cause nose and throat irritation.

**Ingestion**

May cause irritation of the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

No information was located.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Cyclohexanol	Not Listed	Not designated	Not Listed	Not Listed

## Reproductive Toxicity

### Development of Offspring

No information was located.

### Sexual Function and Fertility

No information was located.

### Effects on or via Lactation

No information was located.

## Germ Cell Mutagenicity

No information was located.

## Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

**Special Precautions** Not applicable

### Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

#### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**NFPA Rating**                      **Health - 1**      **Flammability - 2**      **Instability - 0**

**SDS Prepared By**              Alphachem Limited

**Phone No.**                        (905)-821-2995

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**References**                      CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer**                        This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or

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reliance on any information herein.

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