

2-Ethoxyethanol

SECTION 1. IDENTIFICATION

| | |
|--------------------------------------|--|
| Product Identifier | 2-Ethoxyethanol |
| Other Means of Identification | Cellosolve, Ethyl glycol, Ethyl Cellosolve, EGEE, Glycol Ether EE |
| Product Code(s) | GL5220 |
| Product Family | Organic Solvent |
| Recommended Use | Laboratory and industrial use. |
| Restrictions on Use | None known. |
| Supplier Identifier | Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995 |
| Emergency Phone No. | Infotrac, 1-800-535-5053, 24 Hours |
| SDS No. | 0709 |

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 3; Acute toxicity (Inhalation) - Category 4; Reproductive toxicity - Category 1B

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Flammable liquid and vapour.
May damage fertility.
May damage the unborn child.
Harmful if swallowed, in contact with skin or if inhaled.

Precautionary Statement(s):

Obtain special instructions before use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

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Continue rinsing.

If exposed or concerned: Call a POISON CENTRE/doctor/

Storage:

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

Disposal:

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

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients. Substance:

| Chemical Name | CAS No. | % | Other Identifiers |
|-----------------|----------|------|---|
| 2-Ethoxyethanol | 110-80-5 | > 99 | Cellosolve, Ethyl glycol, Ethylene glycol ethyl ether, EGEE |

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Get immediate medical advice or attention.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Rinse with lukewarm, gently flowing water for 5 minutes. Immediately call a Poison Centre or doctor.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a Poison Centre or doctor.

Ingestion

Do not induce vomiting. Rinse mouth with water. If breathing has stopped, trained personnel should immediately begin rescue breathing. Immediately call a Poison Centre or doctor. Specific treatment is required.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

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 or appropriate foam. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

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Closed containers may rupture violently when heated releasing contents. Can be ignited by static discharge. May travel a considerable distance to a source of ignition and flash back to a leak or open container. May accumulate in hazardous amounts at ceilings and at the top of confined spaces, resulting in a fire and/or health hazard. In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide. Peroxides.

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. 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. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere, sufficient oxygen. Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

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. Evacuate downwind locations. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials. May collect in hazardous amounts, at ceilings and at the top of confined spaces, if ventilation is not sufficient. Before entry, especially into confined areas, check atmosphere with an appropriate monitor. Monitor area for flammable or explosive atmosphere.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Contain spill with earth, sand, or absorbent material which does not react with spilled material.

Small spills or leaks: place used absorbent into suitable, covered, labelled containers for disposal.

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

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Wear personal protective equipment to avoid direct contact with this chemical. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Avoid generating vapours or mists. Avoid release to the environment. Inspect container and lid carefully for damage, leaks or signs of peroxide crystallization before handling. 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 material.

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, separate from incompatible materials (see Section 10: Stability and Reactivity), secure and separate from work areas. Keep amount in storage to a minimum. 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 |
| 2-Ethoxyethanol | 5 ppm | | Not established | | | |

Appropriate Engineering Controls

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

amount in the air. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

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, Barrier® (PE/PA/PE), Silver Shield/4H® (PE/EVAL/PE), Tychem® BR/LV, Tychem® Responder, Tychem® TK.

The following materials should NOT be used: natural rubber, polyvinyl alcohol, polyvinyl chloride, Viton®.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge, wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|--|---|
| Appearance | Colourless liquid. |
| Odour | Ethereal |
| Odour Threshold | 0.54 - 79 ppm (recognition) Not reliable. |
| pH | Not available |
| Melting Point/Freezing Point | -70 - -90 °C (-94 - -130 °F) (melting); -70 - -90 °C (-94 - -130 °F) (freezing) |
| Initial Boiling Point/Range | 135 °C (275 °F) |
| Flash Point | 43 - 44 °C (109 - 111 °F) |
| Evaporation Rate | ~ 0.4 (n-butyl acetate = 1) |
| Flammability (solid, gas) | Not applicable |
| Upper/Lower Flammability or Explosive Limit | 15.6% (upper); 1.7% (lower) |
| Vapour Pressure | 0.51 kPa (3.83 mm Hg) at 20 °C |
| Vapour Density (air = 1) | 3.1 |
| Relative Density (water = 1) | 0.93 at 20 °C |
| Solubility | Soluble in water; Soluble in all proportions in alcohols (e.g. ethanol). |
| Partition Coefficient, n-Octanol/Water (Log Kow) | -0.54 |
| Auto-ignition Temperature | 235 °C (455 °F) |
| Decomposition Temperature | Not available |
| Viscosity | Not available (kinematic); 2.1 mPa.s at 20 °C (dynamic) |
| Other Information | |
| Physical State | Liquid |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Sunlight. Light. Exposure to air. Temperatures above 43.0 °C (109.4 °F)

Incompatible Materials

Oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

Peroxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|-----------------|----------------------------------|------------------|---------------------|
| 2-Ethoxyethanol | 2650 ppm (rat) (4-hour exposure) | 2125 mg/kg (rat) | 3310 mg/kg (rabbit) |

Skin Corrosion/Irritation

Animal tests show mild irritation.

Serious Eye Damage/Irritation

Animal tests show mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At high concentrations may cause depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Ingestion

Harmful.

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 |
|-----------------|---------------|----------------|------------|------|
| 2-Ethoxyethanol | Not evaluated | Not designated | Not Listed | |

Reproductive Toxicity

Development of Offspring

Animal studies show effects on the offspring.

Sexual Function and Fertility

Animal studies show effects on sexual function and/or fertility.

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

| Regulation | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|---------------------------------|----------------------------|---------------|
| US DOT | UN1171 | ETHYLENE GLYCOL MONOETHYL ETHER | 3 | III |
| Canadian TDG | UN1171 | ETHYLENE GLYCOL MONOETHYL ETHER | 3 | III |

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

Date of Preparation September 12, 2016

Date of Last Revision September 15, 2016

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 reliance on any information herein.

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