



Monarch Oil (Kitchener) Limited

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GLYCOL ETHER EP (C)

CCH590

1. Product and Company Identification

Product identifier	Propyl Cellosolve (Ethylene Glycol Monopropyl Ether, Glycol Ether EP)
Version #	01
Issue date	07-27-2014
Chemical description	Aliphatic ether alcohol
MSDS Number	CCH590
Product use	Professional use only
Manufacturer information	Refer to supplier
Supplier	Comet Chemical 3463 Thomas Street Innisfill, ON L9S 3W4 CA Information (M-F 8:00-5:00): 705-436-5580 24 Hour Number (Newalta): 800-567-7455

2. Hazards Identification

Emergency overview	Clear, colorless liquid. Ether-like odor. DANGER Combustible liquid and vapor. Will be easily ignited by heat, spark or flames. Causes severe skin irritation. May cause central nervous system effects. May cause respiratory irritation. Prolonged or repeated overexposure may cause blood, liver and kidney effects.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact. Skin absorption.
Eyes	Can cause severe eye irritation.
Skin	Harmful in contact with skin. Direct skin contact may cause slight or mild, transient irritation.
Inhalation	May cause irritation of respiratory tract. May cause central nervous system effects.
Ingestion	Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.
Target organs	Central nervous system. Eyes. Liver. Kidneys. Blood.
Chronic effects	Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Prolonged or repeated overexposure may cause blood, liver and kidney effects.
Signs and symptoms	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Harmful in contact with skin. Direct skin contact may cause slight or mild, transient irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause drowsiness or dizziness. May cause respiratory irritation. Symptoms may include coughing, choking and wheezing. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Potential environmental effects	See ECOLOGICAL INFORMATION, Section 12.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ethylene Glycol Monopropyl Ether	2807-30-9	100

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin contact	Immediately flush skin with plenty of water. Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Inhalation	Move to fresh air. If breathing is difficult, trained personnel should give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Notes to physician Treat symptomatically. This product is a CNS depressant.
General advice If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties Combustible by WHMIS criteria. Combustible liquid and vapor. Vapors may travel considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors.

Extinguishing media
Suitable extinguishing media Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO₂).
Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters
Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases. Confined space hazard. Can accumulate in confined spaces, producing an explosion and toxicity hazard.
Protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

Explosion data
Sensitivity to static discharge Not expected to be sensitive to static discharge.
Sensitivity to mechanical impact Not expected to be sensitive to mechanical impact.

Hazardous combustion products Burning will produce toxic fumes containing carbon monoxide and carbon dioxide. Hydrocarbons. Other irritating fumes and smoke.

General fire hazards Combustible liquid and vapor. Vapors are heavier than air and may spread along floors. Vapors may travel considerable distance to a source of ignition and flash back. Fire may produce irritating, corrosive and/or toxic gases.

6. Accidental Release Measures

Personal precautions Wear appropriate protective equipment and clothing during clean-up. Ventilate the contaminated area. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions For large (industrial) releases, prevent spill from entering a waterway.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Methods for cleaning up Ventilate the contaminated area. Remove sources of ignition. Use only non-sparking tools. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Local authorities should be advised if significant spillages cannot be contained. For waste disposal, see section 13 of the MSDS.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Wear appropriate personal protective equipment. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Label containers appropriately. Use only non-sparking tools. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Avoid breathing mist or vapor. Avoid contact with eyes, skin and clothing. Wash hands after handling and before eating. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Storage Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Do not handle or store near an open flame, heat or other sources of ignition. No smoking in the area. Keep away from heat and sources of ignition. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep away from food, drink and animal feedingstuffs. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	

Canada - Ontario OELs: Skin designation

Ethylene Glycol Monopropyl Ether (CAS 2807-30-9) Can be absorbed through the skin.

Engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.
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Personal protective equipment

Eye/face protection	Chemical goggles and face shield are recommended. Eye wash fountain and emergency showers are recommended.
Skin protection	Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Impervious gloves. Advice should be sought from glove suppliers.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. A NIOSH/MSHA approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. Advice should be sought from respiratory protection specialists.
Hand protection	Gloves impervious to the material are recommended. Advice should be sought from glove suppliers.

9. Physical & Chemical Properties

Appearance	Clear, colorless liquid with ether-like odor.
Physical state	Liquid.
Form	Transparent liquid.
Color	Clear colorless or nearly colorless
Odor	Ether-like.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	1.7 mm Hg at 20°C
Vapor density	3.6
Boiling point	302 °F (150 °C)
Melting point/Freezing point	-90 / -130 °F (-90 °C)
Solubility (water)	Soluble
Specific gravity	0.91 at 20 °C
Relative density	Not available.
Flash point	116.6 °F (47.0 °C) Closed Cup
Flammability limits in air, upper, % by volume	16 %
Flammability limits in air, lower, % by volume	1.3 %
Auto-ignition temperature	Not available.
VOC	100 %
Evaporation rate	Not available.
Partition coefficient (n-octanol/water)	Not available.
Molecular weight	104.15 g/mol
Molecular formula	C5-H12-O2
Other data	
Density	0.91 g/cm ³
Solubility (other)	Ethanol, diethyl ether

10. Chemical Stability & Reactivity Information

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not use in areas without adequate ventilation. Keep away from heat, sparks and open flame. Keep away from direct sunlight. Avoid contact with incompatible materials. Avoid high temperatures.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known, refer to hazardous combustion products in Section 5. The following may be released during a fire: Carbon oxides. Other irritating fumes and smoke.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Ethylene Glycol Monopropyl Ether (CAS 2807-30-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	875 ml/kg
<i>Inhalation</i>		
LC50	Rat	No Data in Literature
<i>Oral</i>		
LD50	Rat	3089 mg/kg
Acute effects	Harmful in contact with skin. See data above for individual ingredient acute toxicity data. May cause central nervous system effects. May cause irritation to the respiratory tract. Causes serious eye irritation.	
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Chronic skin contact with low concentrations may cause dermatitis. Prolonged or repeated overexposure may cause blood, liver and kidney effects.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Skin corrosion/irritation	Direct skin contact may cause slight or mild, transient irritation.	
Serious eye damage/irritation	Causes severe eye irritation.	
Mutagenicity	Not expected to be mutagenic.	
Reproductive effects	This product is not expected to cause reproductive or developmental effects.	
Teratogenicity	This product is not expected to be a teratogen.	
Symptoms and target organs	Causes severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct skin contact may cause slight or mild, transient irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Harmful in contact with skin. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system. May cause central nervous system effects. May cause irritation to the nose, throat and upper respiratory tract. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.	
Epidemiology	No epidemiological data is available for this product.	
Synergistic materials	Not available.	

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results
Ethylene Glycol Monopropyl Ether (CAS 2807-30-9)		
Aquatic		
<i>Acute</i>		
Algae	EC50 Green Algae (<i>Pseudokirchneriella subcapitata</i>)	2587 mg/l, 72 hours

Components	Species	Test Results
Crustacea	EC50	Water flea (Daphnia magna) 4622 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) > 5000 mg/l, 96 hours
<i>Chronic</i> Algae	NOEC	Green Algae (Pseudokirchneriella subcapitata) > 100 mg/l, 72 hours

Ecotoxicity	This material is not expected to be harmful to aquatic life.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Aquatic toxicity	The product should not be allowed to enter drains, water courses or the soil.
Persistence and degradability	Readily biodegradable.
Mobility in environmental media	High water solubility indicates a high mobility in soil.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Ethylene Glycol Monopropyl Ether)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	D
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Ethylene Glycol Monopropyl Ether)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Ethylene Glycol Monopropyl Ether)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.

EmS

F-E, S-E

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG



15. Regulatory Information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Controlled

WHMIS classification

B3 - Combustible Liquids
D1B - Immediate/Serious-TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings

Health: 2
Flammability: 2
Physical hazard: 1

NFPA ratings

Health: 2
Flammability: 2
Instability: 1

Disclaimer

Prepared by: ICC The Compliance Center Inc. 1-888-442-9628
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Disclaimer

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Legend to abbreviations and acronyms used in the SDS

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CEPA: Canadian Environmental Protection Act
CPR: Controlled Products Regulation
DSL: Domestic Substance List
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: Lethal Concentration
LD: Lethal Dose
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OECD: Organisation for Economic Co operation and Development
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TWA: Time Weighted Average
STEL: Short Term Exposure Limit

References

Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2014
(Chempendium, RTECs, HSDB, INCHEM)
European Chemicals Agency, Classification Legislation, 2014.
Material Safety Data Sheet from manufacturer.
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2014.