



Product Name: PROPYLENE GLYCOL USP/EP

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1. Product and Company Identification

Product Name

PROPYLENE GLYCOL USP FOOD GRADE / EP

Identified uses

We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative. Humectant and solvent for: Foodstuffs. Flavours. Cosmetics. Pharmaceuticals. Personal care applications. Not for use in cat food.

COMPANY IDENTIFICATION

Name: Terra Fortuna Ventures Pty Ltd
Name or business name: Extol Lubricants
Place of business or headquarters: 3/2 Brandon Park Drive Wheelers Hill VIC 3150
Telephone: +03 9566 7240
Fax: +03 9566 7299

1.4 Emergency telephone number
Company telephone number: 1300 2665268

For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126

2. Hazards Identification

HAZARDOUS SUBSTANCES CLASSIFICATION: Not classified as hazardous to health according to the criteria of the National Occupational Health and Safety Commission, Australia

3. Composition Information

<u>Component</u>	<u>Amount</u>	<u>Classification:</u>	<u>CAS #</u>	<u>E</u>
Propylene glycol	> 99.8 %	Not classified.	57-55-6	200-338

4. First Aid Procedures

Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin Contact: Wash skin with plenty of water.

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary. Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Extinguishing Media to Avoid: Do not use direct water stream. May spread fire,

Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation.

Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Any absorbent material. Collect in suitable and properly labeled open containers. Wash the spill site with large quantities of water. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. C1 Combustible Liquid - according to AS1940 - Storage and Handling of Flammable and Combustible Liquids. Classified as a Dangerous Good in accordance with Victorian Dangerous goods (Storage and Handling) Regulations, 2000. Store in accordance with all applicable regulations.

Storage

Store away from direct sunlight or ultraviolet light. Keep container tightly closed when not in use. Store in a dry place. Protect from atmospheric moisture. Store in the following material(s): Stainless steel. Aluminum. Container lined with phenolic or epoxy-phenolic FDA food contact approved coating. 316 stainless steel. Opaque HDPE plastic container.

Shelf life: Use within	Maximum storage temperature
24 Months	40 °C

8. Exposure Controls | Personal Protection

Exposure Limits

Component	List	Type	Value
Propylene glycol	AU OEL	TWA Total vapour and particulates.	474 mg/m ³ 150 ppm
	AU OEL	TWA Particulate.	10 mg/m ³
	WEEL	TWA Aerosol.	10 mg/m ³

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin Protection: No precautions other than clean body-covering clothing should be needed.

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Other Information

Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:
 AS/NZS 1336: Recommended practices for eye protection in the industrial environment.
 AS/NZS 1337: Eye protectors for industrial applications.
 AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
 AS/NZS 2161: Occupational protective gloves.
 AS/NZS 2210: Occupational protective footwear.
 AS 2919: Industrial clothing.

19. Physical and Chemical Properties

Appearance	
Physical State	Liquid.
Color	Colorless
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting Point	< -20 °C EC Method A1 < -
Freezing Point	20 °C EC Method A1 184 °C
Boiling Point (760 mmHg)	EC Method A2 . 104 °C EC
Flash Point - Closed Cup	Method A9 (PMCC)
Flash Point - Open Cup	No test data available
Evaporation Rate (Butyl Acetate = 1)	0.01 Estimated.
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	Lower: 2.6 %(V) Estimated. Upper: 12.5 %(V) Estimated.
Vapor Pressure	20 Pa @ 25 °C EC Method A4
Vapor Density (air = 1)	2.62 Literature
Specific Gravity (H2O = 1)	1.03 20 °C/20 °C EC Method A3
Solubility in water (by weight)	100 % @ 20 °C EC Method A6
Partition coefficient, n-octanol/water (log Pow)	-1.07 Measured
Autoignition Temperature	100.01 kPa > 400 °C EC Method A1 5
Decomposition Temperature	No test data available
Dynamic Viscosity	43.4 mPa.s @ 25 °C Literature
Kinematic Viscosity	No test data available
Explosive properties	Not explosive

Oxidizing properties	No
Liquid Density	1.03 g/cm ³ @ 20 °C Literature
Solubility in Solvents	No test data available
Pour point	< -57 °C Literature
Henry's Law Constant (H)	1.2E-08 atm*m ³ /mole Measured

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7. Hygroscopic.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.

Incompatible Materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers. Organic acids.

11. Toxicological Information

Acute Toxicity

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, rat > 20,000 mg/kg

Aspiration hazard

Based on physical properties, not likely to be an aspiration hazard.

Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

No deaths occurred at this concentration. LD50, rabbit > 2,000 mg/kg

Inhalation

At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

No deaths occurred at this concentration. LC50, 2 h, Aerosol, rabbit 317.042 mg/l

Eye damage/eye irritation

May cause slight temporary eye irritation. Corneal injury is unlikely. Mist may cause eye irritation.

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.

Sensitization

Skin

Did not cause allergic skin reactions when tested in humans.

Respiratory

No relevant data found.

Repeated Dose Toxicity

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Chronic Toxicity and Carcinogenicity

Did not cause cancer in laboratory animals.

Developmental Toxicity

Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive Toxicity

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Genetic Toxicology

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. Ecological Information**Toxicity**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/1C50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 h: 40,613 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, *Ceriodaphnia Dubia* (water flea), static test, 48 h: 18,340 mg/l

Aquatic Plant Toxicity

ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth rate inhibition, 96 h: 19,000 mg/l

Toxicity to Micro-organisms

EC50, activated sludge test (OECD 209), Respiration inhibition, 3 h: > 1,000 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Ceriodaphnia Dubia (water flea), semi-static test, 7 d, number of offspring, NOEC: 13020 mg/l

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

OECD Biodegradation Tests:

Biodegradation Exposure Time

		Method	10 Day Window
81 %	28 d	OECD 301F Test	pass
96 %	64 d	OECD 306 Test	Not applicable

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -1.07 Measured

Bioconcentration Factor (BCF): 0.09; Estimated.

Mobility in soil

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): < 1 Estimated.

Henry's Law Constant (H): 1.2E-08 atm*M3/mole Measured

13. Disposal Considerations

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.

14. Transport Information

ADG Non-Bulk
NOT REGULATED

ADG Bulk
NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15.Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

Australia. Industrial Chemical (Notification and Assessment) Act

The principal components and additives of this product are included in the Australian inventory of Chemical Substances (AICS) or comply with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989.

Classification and User Label Information

No regulatory requirements known.

16. Other Information

Product Literature

Additional information on this and other products may be obtained by visiting our web page.

Revision

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
WNV	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation

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