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RE-ISSUED by CHEMSUPP Infosafe No™ 1CHCI Issue Date : April 2018

Product Name: TRIETHYLENE GLYCOL

Not classified as hazardous

1. Identification

GHS Product

TRIFTHYLENE GLYCOL

Identifier

CHEM-SUPPLY PTY LTD (ABN 19 008 264 211) **Company Name**

38 - 50 Bedford Street GILLMAN **Address**

SA 5013 Australia

Telephone/Fax Number

Tel: (08) 8440-2000 Fax: (08) 8440-2001

Recommended use of the chemical and restrictions on use

Other Information

Solvent and plasticizer in vinyl, polyester and polyurethane resins; dehydration of natural gas; humectant

TL069

in printing inks; extraction solvent and laboratory reagent.

Other Names Name Product Code

Trigol

TEG

TRIETHYLENE GLYCOL LR +61 08 8440 2000 **EMERGENCY CONTACT NUMBER:**

Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods

or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture

Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

3. Composition/information on ingredients

Chemical Liquid

Characterization

Ingredients <u>Name</u> CAS **Proportion Hazard Symbol Risk Phrase**

> Triethylene glycol 112-27-6 100 %

4. First-aid measures

Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If Inhalation

breathing is difficult, give oxygen. Seek medical attention in severe cases, if symptoms develop, or if

breathing is difficult.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed.

DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and Skin

wash before re-use. Seek medical advice if effects persist.

If contact with the eye(s) occur, wash with copious amounts of water for approximately 15 minutes Eve contact

holding eyelids(s) open. Take care not to rinse contaminated water into the non-effected eye. If irritation

develops seek medical attention.

First Aid Facilities Maintain eyewash fountain and drench facilities in work area.

Treat symptomatically based on judgement of doctor and individual reactions of the patient. **Advice to Doctor**

For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 Other Information

766) or a doctor.

5. Fire-fighting measures



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Hazards from Combustion

Toxic and/or irritating fumes, smoke and gases including carbon monoxide and carbon dioxide.

Products

Specific Methods Small fire: Use dry chemical, CO2, water spray or foam.

Large fire: Use water spray, fog or foam.

Specific hazards arising from the

May burn but do not ignite readily. Runoff may pollute waterways. Fire may produce irritating, poisonous

and/or corrosive fumes. Containers may explode when heated.

chemical

6. Accidental release measures

Evacuate the area of all non-essential personnel. Avoid inhalation and ingestion. Avoid contact with Personal

Precautions skin, eyes and clothing.

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Small Spillages Environmental

Clean-up Methods - Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labelled,

sealable container for subsequent safe disposal. Prevent from entering into drains, ditches or rivers.

Precautions

7. Handling and storage

Precautions for Safe Avoid ingestion and inhalation. Avoid contact with eyes, skin, and clothing. Ensure good ventilation at

Handling

Conditions for safe Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible materials.

storage, including

any

incompatabilities

Storage Regulations Classified as C2 (Combustible Liquid) for the purpose of storage and handling in accordance with

AS1940. Refer Australian Standard AS 1940-2004 'The storage and handling of flammable and

combustible liquids'.

Store at room temperature (15 to 25 °C recommended). Storage

Temperatures

8. Exposure controls/personal protection

Other Exposure A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by SafeWork Australia for this product. There is a blanket limit of 10 mg/m³ for mists when Information

limits have not otherwise been established.

Appropriate Provide sufficient ventilation to ensure that the working environment is below the TWA (time weighted engineering controls average). Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation

is inadequate, a flame proof exhaust ventilation system is required. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further

information concerning ventilation requirements.

Respiratory **Protection**

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and

respirator type depends on exposure levels.

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. **Eye Protection**

Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and

Hand Protection

maintenance. Recommendation: Excellent: Butyl rubber gloves

Personal Protective Equipment Body Protection

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. Flame retardant antistatic protective clothing. Clean clothing or protective clothing should be worn,

preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hygiene Measures

Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other

protective equipment before storing or re-using.

9. Physical and chemical properties

Liquid Form



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Clear, colourless to light yellow viscous liquid. **Appearance**

Odour Practically odourless; mild odour.

-5 to -7 °C. **Melting Point Boiling Point** 285 °C.

Solubility in Water Miscible (soluble) in all proportions.

Solubility in Organic Miscible with alcohol, benzene, toluene; soluble in oxygenated solvents; slightly soluble in ethyl ether,

chloroform; practically insoluble in petroleum ether.

1.125 at 20 °C. **Specific Gravity**

6.5 - 7.5 (100 g/I H2O, 20 °C).

1.33 hPa at 114 ° C. **Vapour Pressure**

Vapour Density

5.17.

(Air=1)

Solvents

Evaporation Rate <0.005 compared with Butyl acetate.

47.8 cP at 20 °C. **Viscosity** Volatile Component 100 %vol @ 21 °C

Partition Coefficient: log P(o/w): -1.98 (25 °C) (calculated); -1.24 to -1.9 (calculated).

n-octanol/water

165 °C (CC); 171 °C (CC); 177 °C (CC). **Flash Point**

Flammability Combustible liquid.

Auto-Ignition 347 °C at 1013 hPa: 371 °C.

Temperature

Flammable Limits -0.9 vol%.

Lower

Flammable Limits -9.2 vol%.

Upper

Explosive vapour-air mixtures may be formed above the flash point, at elevated temperatures, or when **Explosion**

exposed to heat, flame, or spark. **Properties**

Molecular Weight 150.18

Oxidising Properties No oxidizing properties.

Other Information Bulk density: 1126.49 kg/m³ (at 20 °C).

Refractive index: (n 20 °C/D) 1.4559.

10. Stability and reactivity

Chemical Stability Stable under normal temperatures, pressures and conditions of storage and handling. Hygroscopic.

Conditions to Avoid High temperatures, strong heating, flames, ignition sources, exposure to moisture and incompatible

materials.

Incompatible

Strong oxidizing agents, strong acids, sulfuric acid, perchloric acid, alkalis and isocyanates.

Materials Hazardous

Toxic and/or irritating fumes, smoke and gases including carbon monoxide and carbon dioxide.

Decomposition **Products**

Possibility of Can react with oxidizing materials. Glycols undergo violent decomposition in contact with 68-72%

hazardous reactions perchloric acid. **Hazardous** Will not occur.

Polymerization

11. Toxicological Information

Acute Toxicity - Oral LD50 (rat): 15000 mg/kg; LD50 (rabbit): 22460 mg/kg. **Acute Toxicity -**

Dermal

Inhalation

Ingestion Ingestion may cause gastrointestinal irritation with nausea, vomiting and diarrhoea. Possible aspiration hazard. Absorption of large quantities may cause damage of the liver and kidneys.

Exposure to mists may cause mild respiratory tract irritation. Inhalation of vapour/mists is not expected

to cause adverse effects.



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May cause slight skin irritation, with redness, dryness, inflammation and itching. Skin

Eye Causes mild eye irritation. Liquid causes irritation and may cause transient disturbances of corneal

epithelium. However, these effects diminish. Adverse effects are not expected to be permanent. Vapours

are non-irritating.

Carcinogenicity Not listed in the IARC Monographs.

Chronic Effects Chronic ingestion of moderate amounts can cause changes to the liver, kidneys, bladder, and enzyme

> levels. Prolonged exposure may cause skin irritation. Prolonged exposure can cause nausea, headache, and vomiting. Chronic exposure may cause blood effects (severe aplastic anaemia, anaemia, and blood platelet reductions) and central nervous system effects (drowsiness, fatigue, tremors and mental

dullness), pulmonary congestion and oedema and liver and kidney damage.

12. Ecological information

Ecological Information No ecological problems are to be expected when the product is handled and used with due care and

attention.

Persistence and degradability Mobility

Biologic degradation: Slow degradation.

Distribution: log P(o/w): -2.08 (calculated); -1.98 (25 °C) (calculated); -1.24 to -1.9 (calculated).

Bioaccumulative

No bioaccumulation is to be expected (log P(o/w < 1)).

Potential

13. Disposal considerations

Disposal Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and

Considerations disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG); by the IATA Air Transport Dangerous Goods Regulations; or by the IMDG (International Maritime Dangerous Goods) Code.

15. Regulatory information

Regulatory Information Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals. Listed in the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule Not Scheduled

16. Other Information

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons.', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons,

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.

Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous

Chemicals', 2011.

Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide',

Standards Australia/Standards New Zealand, 2010.

Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.

Safe Work Australia, 'Hazardous Substances Information System, 2005'.

Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances

(2011)'

Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational

Environment [NOHSC:1003(1995) 3rd Edition]'.

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:

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Empirical Formula & Empirical Formula: C6-H14-O4.

Structural Formula: HO-CH2-CH2-O-CH2-CH2-O-CH2-OH. Structural Formula





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