

Material Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: TRIETHYLENE GLYCOL

Other names: TEG, Triglycol, Glycol bis(hydroxyethyl)ether, 2-(2'-Hydroxyethoxyethoxy)ethanol, 2,2-Ethylene dioxydiethanol

Recommended use: Solvent and plasticiser in vinyl, polyester, and polyurethane resins; dehydration of natural gas; humectant in printing inks; extraction solvent.

Supplier: BES Kimya
ACN: Sanayi ve Ticaret Ltd. Şti.
ABN:
Street address: Dereboyu Cad. Gözlükçü Sok.
Balcı İş Merkezi No: 4/2
Ortaköy / İSTANBUL
Telephone: Tel: +90 212 227 40 80
Facsimile: Faks: +90 212 227 40 77

Emergency telephone number:

2. HAZARDS IDENTIFICATION

Hazard classification
Non-Hazardous Substance. Non-Dangerous Goods.

Based on available information, this material is not classified as hazardous according to health criteria of NOHSC Australia.

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Classified as a C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

Hazard category
None Assigned.

Risk phrase(s)
None Assigned.

Safety phrase(s)
None Assigned.

Poisons schedule (Aust): None Allocated.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Appearance: Clear colourless liquid.

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CHEMICAL ENTITY	CAS NO.	PROPORTION (%weight/weight)
Triethylene glycol	112-27-6	100%

This material is listed on the Australian Inventory of Chemical Substances (AICS).

4. FIRST AID MEASURES

Ingestion: Rinse mouth with water. Give plenty of water to drink. If vomiting occurs give further water. Seek medical advice.

Eye contact: Irrigate with copious quantities of water. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Skin contact: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If irritation occurs seek medical attention. Wash contaminated clothing before re-use.

Inhalation: Remove victim from exposure. Keep at rest until fully recovered. Seek medical advice.

Medical attention and special treatment: Treat symptomatically. Blockade of alkoxyacetic acid metabolite may follow competitive inhibition of alcohol dehydrogenase with ethanol or 4-methylpyrazole. Maintain plasma ethanol level of 100 to 150 mg/dL. (1)

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: For large fires use water fog, fine water spray or foam. Do not use water jets. For small fires use foam, dry chemical, carbon dioxide or water spray.

Hazards from combustion products: Combustible liquid. On burning will emit toxic fumes including those of carbon monoxide and carbon dioxide.

Precautions for fire fighters and special protective equipment: Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion as well as structural fire fighters uniform.

Hazchem code: None assigned.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Do not touch or walk through spilled material.

Methods and materials for containment and clean up procedures: Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled drums for disposal. Wash area down with excess water to remove residual material.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid eye contact and repeated or prolonged skin contact. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Do not dispose of material to sewers or waterways.

Conditions for safe storage: Store in a cool place and out of direct sunlight. Store away from oxidising agents. Keep containers closed at all times - check regularly for leaks.

Classified as a C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure standards

No value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC Australia).

Biological limit values

Not Relevant.

Engineering controls: Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

Personal protective equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES (Short)
Wear overalls, safety glasses and impervious gloves. If risk of inhalation of spray mists exists, wear combined organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Clear colourless liquid with a very mild sweet odour.

Solubility: Miscible with water, ethyl alcohol, benzene and diethyl ether.

Specific Gravity (20°C):	1.126	Freezing Point (°C):	-7
Rel Vapour Density (air=1):	N Av	Boiling Point (°C):	285
Vapour Pressure (20°C):	0.0013 kPa	Decomp. Point (°C):	N Av
Flash Point (°C):	154 (CC)	Sublimation Point (°C):	N App
Flammability Limits (%):	0.9 – 9.2	pH (1% aqueous soln):	N Av
Autoignition Temp (°C):	360	Viscosity (20°C):	49 cP
% Volatile by weight:	Nil	Evaporation Rate:	N Av
Solubility in water:	N Av	(n-Butyl acetate=1)	

(Typical values only - consult specification sheet)
N Av = Not available N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use.

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Conditions to avoid: Excessive heat will lead to accelerated oxidative degradation.

Incompatible materials: Reacts with strong oxidising agents.

Hazardous decomposition products: Carbon monoxide and carbon dioxide.

Hazardous reactions: None known.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled are:

Acute Effects

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea and abdominal pain.

Eye contact: A mild eye irritant.

Skin contact: Contact with skin may result in mild irritation.

Inhalation: Inhalation of high concentrations of mist may produce respiratory irritation.

Long Term Effects:

A two year oral ingestion study on rats at 3000 – 4000 mg/kg/day caused no adverse effects. (2)

Acute toxicity / Chronic toxicity

Oral LD50 (rat, rabbit, guinea pig): 7900 - 22000 mg/kg (2)

Skin Irritation (Draize, rabbit): mild irritant. (3)

Eye Irritation (Draize, rabbit): mild irritant. (3)

12. ECOLOGICAL INFORMATION

Ecotoxicity

96 hr LC50 (bluegill sunfish): >10,000 mg/L (2)

96 hr LC50 (fathead minnow): 59,900 - 77,400 mg/L (2)

Non hazardous to aquatic organisms.

Persistence/degradability

COD: 1.57 mg O₂/L (2)

BOD5: 0.03 mg O₂/L (2)

The substance is expected to be readily biodegradable according to the AS 4351 Part 2 test method.

Mobility

No data available for product.

Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

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Disposal methods: Empty containers should be forwarded to an approved agent for recycling. Avoid unauthorised discharge to sewer.

Special precautions for landfill or incineration: Material suitable for disposal by incineration or landfill through an approved agent.

14. TRANSPORT INFORMATION

Road and Rail Transport

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Country/Region	Inventory	Status
Australia	AICS	Listed
Canada	DSL	Listed
Europe	EINECS	Listed
Japan	ENCS	Listed
Korea	ECL	Listed
New Zealand	-	Non Hazardous Substance
United States	TSCA	Listed

Poisons schedule (Aust): None Allocated

16. OTHER INFORMATION

Literary reference

- (1) Triethylene Glycol Poisoning Treated with Intravenous Ethanol Infusion, Vassiliadis, J. et al., Clinical Toxicology, 37(6), pp 773 – 776, 1999.
- (2) The Dictionary of Substances and their Effects, 3rd electronic edition, edited by Gangolli, S., The Royal Society of Chemistry, 2005.
- (3) RTECS #YE4550000, 08/2003.

Reason(s) For Issue: Five year update. Revised first aid information.

Material Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

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