



Safety Data Sheet

MEGlobal Europe GmbH

Safety Data Sheet according to Reg. (EC) N. 453/2010

Product Name: ETHYLENE GLYCOL POLYESTER GRADE

Revision Date: 2014/09/11

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MEGlobal Europe GmbH encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

Section 1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifiers

Product Name

ETHYLENE GLYCOL POLYESTER GRADE

Chemical Name: Ethanediol; ethylene glycol

CAS-No. 107-21-1

EC-No. 203-473-3

REACH Registration Number

01-2119456816-28-0009
01-2119456816-28-0012
01-2119456816-28-0013
01-2119456816-28-0014
01-2119456816-28-0015
01-2119456816-28-0016
01-2119456816-28-0017
01-2119456816-28-0018
01-2119456816-28-0074

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Manufacture of substances Industrial use as intermediate. Use as process chemical, industrial. Distribution of substance, industrial. Formulation & (re)packing of substances and mixtures, industrial. Polymer production, industrial. Use in paints and coatings, industrial. Use in Cleaning Agents, industrial. Use in lubricants, industrial. Use in metal-working fluids, industrial. Use in laboratories, industrial. Water treatment chemicals Production of polymers, filled polymers, foams, coatings, adhesives and sealants, industrial. Functional Fluids, industrial. Use in paints, coatings, adhesives, sealants, foams, polymers and filled polymers, professional. Use in Cleaning Agents, professional. Use in metal-working fluids, professional. Functional Fluids, professional. Use in laboratories, professional. Use in paints, coatings and surface treatment products, consumer. Use in heat transfer and hydraulic fluids, consumer. Use in adhesives and sealants, consumer. Production of rigid foam, consumer.

Uses advised against

Production of tobacco products Generation of artificial smoke Electronic cigarettes (e-cigarettes) Applications with direct or indirect food or potable water contact Any application where the product is to be purposely used as a non-reactant component where the potential for sufficient human contact and/or ingestion exists Freezer gel packs and heating packs Glues and pastes Manufacturing of munitions Sprinkler systems Deicing of road or sidewalks Deicing of aircraft lavatories Consumer or hospital usage for deodorizing or air "purifying" purposes by spraying as an aerosol Fluid for pressure testing piping Pharmaceutical Use Treatment of wood rot and fungus in marine applications

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

MEGlobal Europe GmbH
Bachtobelstrasse 3
8810 Horgen
Switzerland

Customer Information Number:

+41 44728 2077

[http://www.meglobal.biz/
SDSQuestion@dow.com](http://www.meglobal.biz/SDSQuestion@dow.com)

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

0041 447 28 2820

Local Emergency Contact:

00 31 115 69 4982

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification - REGULATION (EC) No 1272/2008

Acute toxicity (Oral)	Category 4	H302	Harmful if swallowed.
Specific target organ toxicity - repeated exposure (Oral)	Category 2	H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn

R48/22

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

2.2 Label elements

Labelling - REGULATION (EC) No 1272/2008

Hazard pictograms



Signal Word: Warning

Hazard statements:

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

P270 Do not eat, drink or smoke when using this product.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash hands thoroughly after handling.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P314 Get medical advice/ attention if you feel unwell.

P501 Dispose of contents and container to licensed, permitted incinerator, or other thermal destruction device.

2.3 Other Hazards

No information available.

Section 3. Composition/information on ingredients

3.1 Substance

This product is a substance.

CAS-No. / EC-No. / Index	REACH No.	Amount	Component	Classification: REGULATION (EC) No 1272/2008
CAS-No. 107-21-1 EC-No. 203-473-3 Index 603-027-00-1	01- 2119456816- 28	> 99.0 %	Ethanediol; ethylene glycol	Acute Tox., 4, H302 STOT RE, 2, H373

CAS-No. / EC-No. / Index	Amount	Component	Classification: 67/548/EEC
CAS-No. 107-21-1 EC-No. 203-473-3 Index 603-027-00-1	> 99.0 %	Ethanediol; ethylene glycol	Xn: R48/22

For the full text of the H-Statements mentioned in this Section, see Section 16.
See Section 16 for full text of R-phrases.

Section 4. First-aid measures

4.1 Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). 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: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

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: Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child].

4.2 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), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of immediate medical attention and special treatment needed

If several ounces (60 - 100 ml) of ethylene glycol have been ingested, early administration of ethanol may counter the toxic effects (metabolic acidosis, renal damage). Consider hemodialysis or peritoneal

dialysis & thiamine 100 mg plus pyridoxine 50 mg intravenously every 6 hours. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. Maintain adequate ventilation and oxygenation of the patient. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5. Fire Fighting Measures

5.1 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.

5.2 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. Nitrogen oxides.

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.

5.3 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.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

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

6.3 Methods and materials for containment and cleaning up: Contain spilled material if possible. Collect in suitable and properly labeled containers. Small spills: Absorb with materials such as: Cat litter. Sand. Sawdust. Zorb-all®. Hazorb®. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and Storage

7.1 Precautions for safe handling

Handling

General Handling: Do not swallow. Avoid contact with eyes. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Do not store near food, foodstuffs, drugs or potable water supplies. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

7.3 Specific end uses

See the technical data sheet on this product for further information.

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure Limits

Component	List	Type	Value
Ethanediol; ethylene glycol	ACGIH	Ceiling	100 mg/m ³
	EU IOELV	Aerosol.	
		TWA	52 mg/m ³ 20 ppm SKIN
	EU IOELV	STEL	104 mg/m ³ 40 ppm SKIN
	UK WEL	TWA	10 mg/m ³ SKIN
		Particulate.	
	UK WEL	TWA Vapor.	52 mg/m ³ 20 ppm SKIN
	UK WEL	STEL Vapor.	104 mg/m ³ 40 ppm SKIN
	Ireland OELV	TWA Vapor.	52 mg/m ³ 20 ppm SKIN
		Indicative OELV	
	Ireland OELV	TWA	10 mg/m ³ SKIN
		Particulate.	Indicative OELV
	Ireland OELV	STEL Vapor.	104 mg/m ³ 40 ppm SKIN
		Indicative OELV	

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

Derived No Effect Level (DNEL)

Workers

Potential Health Effects	Possible route(s) of exposure:	Value
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Acute - systemic effects	Skin contact	Not available
Acute - systemic effects	Inhalation	Not available
Acute - local effects	Skin contact	Not available
Acute - local effects	Inhalation	Not available
Long-term - systemic effects	Skin contact	106 mg/kg bw/day
Long-term - systemic effects	Inhalation	Not available
Long-term - local effects	Skin contact	Not available
Long-term - local effects	Inhalation	35 mg/m3

Consumers

Potential Health Effects	Possible route(s) of exposure:	Value
Acute - systemic effects	Skin contact	Not available
Acute - systemic effects	Inhalation	Not available
Acute - local effects	Skin contact	Not available
Acute - local effects	Inhalation	Not available
Long-term - systemic effects	Skin contact	53 mg/kg bw/day
Long-term - systemic effects	Inhalation	Not available
Long-term - local effects	Skin contact	Not available
Long-term - local effects	Inhalation	7 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment	Value	Remarks
Fresh water	10 mg/l	
Marine water	1 mg/l	
Intermittent releases	10 mg/l	
Fresh water sediment	20.9 mg/kg	
Soil	1.53 mg/kg d.w.	
STP	199.5 mg/l	

8.2 Exposure controls

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. When handling hot material, protect skin from thermal burns as well as from skin absorption.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Use gloves with insulation for thermal protection (EN 407), when needed. Examples of preferred glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

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. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use

an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face 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.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

Physical State	Liquid.
Color	Colorless
Odor	Sweet
Odor Threshold	No test data available
pH	9 <i>Literature</i>
Melting Point	Not applicable to liquids
Freezing Point	-11.2 °C <i>Literature</i>
Boiling Point (760 mmHg)	197.4 °C <i>Literature</i>
Flash Point - Closed Cup	111 °C <i>Literature</i>
Evaporation Rate (Butyl Acetate = 1)	0.01 <i>Literature</i>
Flammability (solid, gas)	No
Flammable Limits In Air	Lower: 3.2 %(V) <i>Literature</i> Upper: 15.3 %(V) <i>Literature</i>
Vapor Pressure	0.067 hPa @ 20 °C <i>Literature</i>
Vapor Density (air = 1)	2.1 <i>Literature</i>
Specific Gravity (H ₂ O = 1)	1.115 20 °C/20 °C <i>Literature</i>
Solubility in water (by weight)	100 % <i>Literature</i>
Partition coefficient, n-octanol/water (log Pow)	-1.36 <i>Measured</i>
Autoignition Temperature	398 °C <i>Literature</i>
Decomposition Temperature	No test data available
Dynamic Viscosity	19.83 mPa.s @ 20 °C <i>Literature</i>
Explosive properties	no data available
Oxidizing properties	no data available

9.2 Other information

Solubility in Solvents	not applicable
Molecular Weight	62 g/mol <i>Literature</i>
Molecular Formula	HOC ₂ H ₄ OH
Henry's Law Constant (H)	8.05E-09 atm*m ³ /mole; 25 °C Estimated.

Section 10. Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Thermally stable at recommended temperatures and pressures.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

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

10.6 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.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity

Ingestion

Oral toxicity is expected to be moderate in humans due to ethylene glycol even though tests with animals show a lower degree of toxicity. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure.

For Ethylene glycol: Lethal Dose, Human, adult 100 ml

LD50, rat, male and female 7,712 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. Repeated skin exposure to large quantities may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

LD50, rabbit > 10,600 mg/kg

LD50, mouse, male and female > 3,500 mg/kg

Inhalation

At room temperature, exposure to vapor is minimal due to low volatility. With good ventilation, single exposure is not expected to cause adverse effects. If material is heated or areas are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.

LC50, 6 h, Aerosol, rat, male and female > 2.5 mg/l

Eye damage/eye irritation

May cause slight eye irritation. Corneal injury is unlikely. Vapor or mist may cause eye irritation.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness. Repeated contact may cause skin irritation with local redness.

Sensitization

Skin

Did not cause allergic skin reactions when tested in guinea pigs.

Respiratory

No relevant data found.

Repeated Dose Toxicity

Observations in humans include: Nystagmus (involuntary eye movement). In animals, effects have been reported on the following organs: Kidney. Liver.

Chronic Toxicity and Carcinogenicity

Ethylene glycol did not cause cancer in long-term animal studies.

Developmental Toxicity

Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation or skin contact, the primary routes of occupational exposure, had minimal effect on the fetus, in animal studies.

Reproductive Toxicity

Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals.

Genetic Toxicology

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

Section 12. Ecological Information

12.1 Toxicity

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, Pimephales promelas (fathead minnow), static test, 96 h: 72,860 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 100 mg/l

Aquatic Plant Toxicity

ErC50, Pseudokirchneriella subcapitata (green algae), Growth rate inhibition, 96 h: 6,500 - 13,000 mg/l

Toxicity to Micro-organisms

EC50, activated sludge test (OECD 209), Respiration inhibition, 30 min: 225 mg/l

12.2 Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
90 - 100 %	10 d	OECD 301A Test	pass
90 %	1 d	OECD 302B Test	Not applicable

12.3 Bioaccumulative potential

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

Partition coefficient, n-octanol/water (log Pow): -1.36 Measured

12.4 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): 8.05E-09 atm*m3/mole; 25 °C Estimated.

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Section 13. Disposal Considerations

13.1 Waste treatment methods

This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

Section 14. Transport Information**ADR/RID****14.1 UN number**

Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

Special Provisions: no data available

Hazard identification No: no data available

ADNR / ADN**14.1 UN number**

Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

no data available

IMDG**14.1 UN number**

Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

EMS Number: Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product Name: ETHYLENE GLYCOL

Ship Type: 3

Pollution Category: Y

ICAO/IATA**14.1 UN number**

Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

no data available

Section 15. Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****European Inventory of Existing Commercial Chemical Substances (EINECS)**

This product is on the EINECS inventory.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16. Other Information**Hazard statement in the composition section**

H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Risk-phrases in the Composition section

R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
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Restrictions in Usage:

Production of tobacco products Generation of artificial smoke Electronic cigarettes (e-cigarettes)
Applications with direct or indirect food or potable water contact Any application where the product is to be purposely used as a non-reactant component where the potential for sufficient human contact and/or ingestion exists Freezer gel packs and heating packs Glues and pastes Manufacturing of munitions Sprinkler systems Deicing of road or sidewalks Deicing of aircraft lavatories Consumer or hospital usage for deodorizing or air "purifying" purposes by spraying as an aerosol Fluid for pressure testing piping Pharmaceutical Use Treatment of wood rot and fungus in marine applications

Revision

Identification Number: 23826 / 3945 / Issue Date 2014/09/11 / Version: 12.0

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

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