Material Safety Data Sheet

Triethylene glycol, 99%

ACC# 01653

Section 1 - Chemical Product and Company Identification

MSDS Name: Triethylene glycol, 99%
Catalog Numbers: AC139590000, AC139590010, AC139590051, AC139590200, AC139590250, 13959-0025
Synonyms: Trigen; Triglycol; TEG; 2,2'-ethylenediqxybis(ethanol); 1,2-Bis(2-hydroxy)ethane; Ethylene glycal-bis-(2-hydroxyethyl ether)
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
112-27-6	Triethylene glycol	100	203-953-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear to light yellow liquid.
Caution! May cause eye and skin irritation. Inhalation of a mist of this material may cause irritation of the lungs. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Target Organs: None.

Potential Health Effects
Eye: May cause eye irritation.

Skin: Exposure may cause irritation characterized by redness, dryness, and inflammation.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Possible aspiration hazard.
Inhalation: Inhalation of a mist of this material may cause respiratory tract irritation.
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.
Flash Point: 165 deg C (329.00 deg F)
Autoignition Temperature: 371 deg C (699.80 deg F)
Explosion Limits, Lower:0.9
Upper: 9.2
NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation.
Storage: Store in a cool, dry place. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Triethylene glycol	none listed	none listed	none listed

OSHA Vacated PELs: Triethylene glycol: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear to light yellow
Odor: mild odor
pH: Not available.
Vapor Pressure: < .001 mm Hg @2
Vapor Density: 5.17
Evaporation Rate:<0.001
Viscosity: 48 mPa s@20 C
Boiling Point: 285 deg C
Freezing/Melting Point:-7 deg C
Decomposition Temperature: Not available.

Solubility: Soluble in water
Specific Gravity/Density:1.125
Molecular Formula:C6H14O4
Molecular Weight:150.0956

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials: Sulfuric acid, isocyanates, perchloric acid, strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 112-27-6: YE4550000
LD50/LC50:
CAS# 112-27-6:
Draize test, rabbit, eye: 500 mg Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, mouse: LD50 = 20000 mg/kg;
Oral, rabbit: LD50 = 8400 mg/kg;
Oral, rabbit: LD50 = 8400 mg/kg;
Oral, rat: LD50 = 17 gm/kg;
Oral, rat: LD50 = 15000 mg/kg;
Skin, rabbit: LD50 = >20 mL/kg;
.

Carcinogenicity:
CAS# 112-27-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: In laboratory tests with rats and mice, fetotoxic effectts and developmental abnormalities were observed.
Mutagenicity: No data available.
Neurotoxicity: No data available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: LC50 = 70,200 mg/L; 96 Hr.; Flow-throughFish: Bluegill/Sunfish: LC50 = 10,000 mg/L; 96 Hr.; Static ConditionsBacteria: Phytobacterium phosphoreum: EC50 = 850 mg/L; 5 miuntes; Microtox test No data available.
Environmental: Terrestrial Fate: Triethylene glycol will have very high mobility in soil. Acquatic fate: Based on a recommended classification scheme, an estimated Koc value of 10, determined from a structure estimation method, indicates that triethylene glycol is not expected to adsorb to suspended solids and sediment in water.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 112-27-6 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 112-27-6: reactive.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 112-27-6 can be found on the following state right to know lists: Pennsylvania.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 112-27-6: 1

Canada - DSL/NDSL

CAS# 112-27-6 is listed on Canada's DSL List.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 112-27-6 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/09/1999
Revision #4 Date: 10/25/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.