

MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL

Revision Date: 04/14/2011

1. PRODUCT IDENTIFICATION

CAS. NO	112-27-6
Chemical Formula	C H O
Family	Glycol
Synonym(s)	Triglycol/TEG

2. REGULATORY STATEMENTS

DOT	49 CFR 172
Shipping name	Not regulated
Hazard class	N/A
I.D.No.	N/A
Label	N/A
Packing group	N/A
CERCLA/SUPERFUND	40 CFR 302
Reportable Quantity	None
CLEAN WATER ACT	40 CFR 117
Reportable Quantity	None
SARA TITLE III &	40 CFR part 372:
Supplier Notification requirement	

This material contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of title III of the superfund amendments and reauthorization act of 1986 and 40 CFR part 372 The “*” preceding the name means the chemical is subject to the requirements.

CAS No.	112-27-6
Chemical Name:	*Triethylene Glycol
Typical Weight %	98.04
OSHA:	
Hazard Communications standard:	29 CFR 1910.1200

The following is/are identified as a hazardous chemical(s):
TRIETHYLENE GLYCOL - IRRITANT & REPRODUCTIVE HAZARD

This material safety data sheet is based on information provided us and the contents are believe to be accurate, although no guarantee or warranty is provided or implied by the company in this respect. Since the use of this product is within the exclusive control of the user, it is the user responsibility to determine the conditions of safe use. Such conditions must comply with all governmental regulations.

III. WARNING STATEMENTS

Irritant – Irritating to eyes, respiratory system and skin.

In case of contact with eye, rinse immediately with plenty of water and seek medical advice. Wear gloves and safety eye/face protection

IV. PRECAUTIONARY MEASURES

Do not breathe vapor. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep tightly closed. Store in cool dry place. Hygroscopic

V. FIRST AID PROCEDURES

EYES – if in eyes, immediately flush with plenty of water for at least 15 minutes. Call physician.

SKIN – If on skin, immediately flush with plenty of water. Remove contaminated clothing.

Wash clothing before reuse

INHALED – If inhaled, remove to fresh air. If not breathing initiate Artificial respiration.

If breathing is difficult, give oxygen. Call a physician

SWALLOWED – If swallowed, if conscious or when consciousness returns, give two glasses of Milk or water. Never give anything by mouth to an unconscious person!

NOTE TO PHYSICIAN: Follow standard medical protocol for chemical exposure.

VI. OCCUPATIONAL CONTROL PROCEDURES

EYE PROTECTION –

Wear chemical splash goggles and have eye baths immediately available at locations

Where there is potential for eye contact.

SKIN PROTECTION –

Wear appropriate protective gloves and protective clothing that provides a barrier to prevent skin contact. Consult glove manufacturer to determine type of gloves for given application. Wear a face shield and an apron that provides a barrier when splashing is likely. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

RESPIRATORY PROTECTION

Avoid breathing mist, dusty and/or vapor. Use NIOSH/OSHA approved equipment when airborne exposure limits are exceeded (see section on exposure limits) Consult Respirator manufacturer to determine appropriate type of equipment for given application the respirator use limitations specified by NIOSH/OSHA and the manufacturer must be observed. High airborne concentrations may require use of self-contained breathing apparatus or supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR 1910 134.

VENTILATION

Provide sufficient ventilation to control exposure levels below airborne exposure limits (see section on exposure limits) Use local mechanical exhaust to ventilate at sources of air contamination such as open process equipment. Consult current NFPA Standard 91 and ACGIH manual on industrial ventilation for design of exhaust system.

EXPOSURE LIMITS

Component	Triethylene Glycol
OSHA PEL, PPM	None
OSHA STEL, PPM	None
OSHA Ceiling, PPM	None
ACGIH TLV, PPM	None
NIOSH IDLH, PPM	None
Approx. ORT* PPM	ND

*Approx. ORT – Approximate Odor Recognition threshold

ND –No Data N/A – Not Applicable

VII. FIRE PROTECTION INFORMATION

Flash point:	>140°F (60°C)
Method :	Closed Cup
Auto Ignition temp:	699°F (370.55°C)
Flammable limits: (In air by volume)	Lower – 0.9% Upper – 9.2%
Extinguishing media:	Water spray. Carbon Dioxide. Dry chemical or appropriate foam
Fire fighting procedure:	Wear self-contained breathing apparatus and protective clothing To prevent contact with skin and eyes.
Unusual explosion hazards:	Emits toxic fumes under fire conditions

VIII. REACTIVITY DATA

Conditions contributing to instability:	None known
Material to avoid:	Strong oxidizing agents and strong acids
Hazardous decomposition products:	Carbon dioxide and carbon monoxide under fire conditions

IX. HEALTH EFFECTS SUMMARY

The following information represents human and animal experience, and the results of Experimentation's conducted to access the physiological properties of this material. This Information was used to develop the warning statements and recommended occupation control procedures. Because dosages were intentionally chosen to induce toxic effects, evaluation of the Following information may require interpretation by qualified person(s)

Human Experience, oral LD10 for humans are 5,000 mg/kg. Animal data in laboratory studies with this material, birth defects fetotoxicity, embryoletality, anemia, bone marrow damage, hemolysis, immune-suppression and damage to the reproductive tissues has been observed.

Oral LD50 (rat)	17 mg/kg
Oral LD60 (rabbit)	8400 mg/kg

X. PHYSICAL PROPERTIES

Physical appearance:	Light straw
Odor:	Mild
Molecular weight:	150
Boiling Point:	272°F (133.33°C)
Solubility in water:	N/D
Freezing Point:	N/D
Vapor Density (Air=1)	5.2
Vapor pressure :	<0.01 mm Hg @ 68°F (20°C)
Specific Gravity :	1.147 @ 6.98°F (21°C)
Viscosity:	N/D
pH.	N/A

Note: These physical data are either calculated or are typical values based on material tested which may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

XI. SPILL, LEAK, DISPOSAL INFORMATION

SPILL OR LEAK PROCEDURES

Keep people away and upwind from spill or leak. Shut off leak. Insure adequate ventilation. If it is necessary that persons enter the spill area, they must wear full protective clothing, including boots. Dike spill and transfer into a salvage tank and absorb spill with a commercial absorbing material, sweeping up compound. Keep spilled material out of sewers, watersheds, and water systems. Run off sewers may create health hazards notify appropriate regulatory pollution control authorities.

To dispose of spills material, follow suggestions under "Waste Disposal" below.

XII. CONTINUED:

WASTE DISPOSAL

Waste Triethylene Glycol is not a RCRA listed/characteristic hazardous waste. In all cases disposal should be in accordance with all local, state and federal laws and Regulations. *This material should not be dumped, spilled or flushed into sewers, public Waterways or the environment*

Preferred Disposal method: Incineration
Other Method: Biodegradation

Applicable federal, state and local regulations should be followed when spills, leaks, or disposal of this material is involved. The applicable federal regulations include but are not limited to the following: 40 CFR – 260, 261, 264 and 258

NOTICE: Although the information and recommendations set forth herein (Hereinafter "information") are presented in good faith and believed to be correct as of the date hereof. Marcus Products Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the person(s) receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Marcus Products Company be responsible for damages of any nature what so ever resulting from the use or reliance upon information. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OF ANY OTHER NATURE ARE MADE ABOVE WITH RESPECT TO INFORMATION OF THE MATERIAL TO WHICH INFORMATION REFERS.