

Ethylene Glycol

MSDS Number: 7200, 7201, 7214, 7215

Revision Date: May 7, 2010

Page 1 of 6

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

KOST USA, Inc
1000 Tennessee Ave.

Cincinnati, OH 45229

Contact: Customer Service
Telephone Number: (800) 661-9391
FAX Number: (513) 492-5555
E-Mail: sales@kostusa.com
Web: www.kostusa.com

Product Name: Ethylene Glycol
Revision Date: May 7, 2010
Version: 1
MSDS Number: 7200, 7201, 7214, 7215
Common Name: 1,2-ethanediol
CAS Number: 107-21-1
Product Code: 7200, 7201, 7214, 7215
Chemical Family: Glycol
Chemical Formula: C₂H₆O₂
Synonyms: MEG, EG, ethane-1,2-diol, monoethylene glycol
Product Use: Chemical Intermediate; Glycol

Emergency Telephone Number: 800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

Route of Entry: Eyes; Skin; Inhalation; Ingestion;
Target Organs: Kidneys;
Inhalation: Vapours expected to be slightly irritating.
Skin Contact: May cause irritation.
Eye Contact: Moderately irritating. Vapour or mist may cause irritation
Ingestion: Harmful if swallowed. May cause drowsiness and dizziness.

HMIS® Rating H3/F1/PH0
NFPA-ratings (scale 0-4): Health = 1, Fire = 1, Reactivity = 0

This is not a WHMIS Controlled substance.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Perc.	Chemical Name
107211	>99%	Ethylene glycol

Ethylene Glycol

MSDS Number: 7200, 7201, 7214, 7215

Revision Date: May 7, 2010

Page 2 of 6

4 FIRST AID MEASURES

- Inhalation:** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
- Skin Contact:** Remove contaminated clothing and wash before reuse. Promptly flush skin with water until all chemical is removed. Wash with soap and water.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Remove contact lenses after initial 1-2 minutes of flushing and continue flushing. Get immediate medical attention.
- Ingestion:** DO NOT DELAY. Do not induce vomiting. For spontaneous vomiting, keep head below hips. Dilute with 1 glass of water. Do NOT give liquids to a drowsy, convulsing or unconscious person. Seek immediate medical attention.

Notes to Physician: May cause significant renal, respiratory and CNS toxicity. May cause significant acidosis. Consider: Gastric lavage with protective airway, administration of ethanol or alcohol dehydrogenase inhibitors, such as fomepizole, as antidotal treatments. Call a doctor or poison control center for guidance.

5 FIRE FIGHTING MEASURES

- Flash Point:** 116°C (241°F)
- Flash Point Method:** PMCC
- Autoignition Temperature:** 427°C (801°F)
- LEL:** 3.2% volume
- UEL:** 15.3% volume
- Flammability Classification:** OSHA/NFPA Class IIIB combustible liquid

Extinguishing Media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not use direct water stream.

Specific Hazards: Material will not burn unless preheated. Containers exposed to intense heat from fires should be cooled with large quantities of water.

Protective Equipment: Wear full protective clothing and self-contained breathing apparatus (SCBA).

Hazardous Combustion Products: Smoke may contain the original material in addition but not limited to: Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides.

6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Isolate area. Avoid contact with spilled material. Watch out for slippery conditions when spillage. Refer to Section 8 of this Material Safety Data Sheet for personal protective equipment.

Clean Up Methods: Contain spilled material if possible. Collect in suitable and properly labeled containers. Small spills: Pick up excess with inert absorbent material and place into separate waste container. Large Spills: Dike material. Keep away from drains and ground water. Pump into suitable and properly containers or salvage truck for recovery or safe disposal. See Section 13 for disposal considerations.

Additional Advice: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

7 HANDLING AND STORAGE

- Handling Precautions:** Do not swallow. Avoid contact with eyes, skin, or clothing. Consider normal working

Ethylene Glycol

MSDS Number: 7200, 7201, 7214, 7215

Revision Date: May 7, 2010

Page 3 of 6

hygiene. Wash thoroughly after handling. Wash clothing before reuse and decontaminate or discard contaminated shoes. Do not expose containers to open flame, excessive heat, or direct sunlight. Do not puncture or drop containers. Handle with care and avoid spillage on the floor (slippage). Keep material out of reach of children. Use local exhaust over processing area.

Storage Requirements:

Keep away from heat, sparks, and flames. Protect container and its fittings from physical damage. Store in cool/dry area. Suitable packing materials. Do not store near food, foodstuffs, drugs or potable water supplies.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Use mechanical (general) ventilation to control airborne levels below exposure guidelines.

Protective Equipment:

HMIS PP, C | Goggles, Gloves, Apron

Eyes/Face Protection: Usage of safety glasses/ goggles is recommended.

Skin Protection: Chemical resistant gloves; Apron; Boots; Face shield or Full suit selection will depend on task. Launder contaminated clothing before use.

Hand Protection: Use of gloves approved to relevant standards made from the following materials may provide suitable protection: PVC, Neoprene rubber or nitrile rubber. Personal hygiene is a key element of effective hand care.

Respiratory Protection: If ventilation does not control airborne concentrations, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.

Ingestion: Use good personal hygiene. do not consume food in the work area. wash hands before eating, drinking or smoking.

Exposure Guidelines/Other:

Exposure Limits:

Component	List	Type	Value
Ethylene Glycol	ACGIH	Ceiling Aerosol	100 mg/m ³

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Colorless

Physical State:

Liquid

Odor:

Sweet

pH:

9.0 estimate

Vapor Pressure:

0.06 mmHg @ 20°C

Vapor Density:

2.1

Boiling Point:

>197°C (>387°F)

Freezing/Melting Pt.:

-13°C (9°F)

Solubility:

Completely

Spec Grav./Density:

1.115 @ 20°C

Evap. Rate:

0.01

Molecular Weight:

62.068

Molecular Formula:

C₂H₆O₂

10 STABILITY AND REACTIVITY

Stability:

Product is stable under normal conditions.

Ethylene Glycol

MSDS Number: 7200, 7201, 7214, 7215

Revision Date: May 7, 2010

Page 4 of 6

Conditions to avoid:	High Temperature.
Materials to avoid (incompatibility):	Strong Oxidizing Agents. Strong Acids; Strong Bases.
Hazardous Decomposition products:	Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide. Aldehydes; Alcohols; Ethers
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral (LD 50): Rat >2000 mg/kg. Human adult 3 Ounces

Inhalation (LC 50): 7h, Aerosol, Rat >3.95 mg/l. inhalation of vapours may cause irritation to the respiratory system

Skin irritation: May cause moderate skin irritation but insufficient to classify.

Dermal Toxicity (LD 50): Rabbit >2000 mg/kg (Low)

Eye irritation: Moderately irritating to eyes but insufficient to classify.

Sensitation: Not a skin sensitizer

Chronic Toxicity and Carcinogenicity: Did not cause cancer in long term animal studies

Repeated Dose Toxicity: Shown effects on: Kidney, Liver, Central Nervous System

Mutagenicity: No evidence

Reproductive and Developmental Toxicity: Ingestion of large amounts have shown to interfere with reproduction and product birth effects in animals.

12 ECOLOGICAL INFORMATION

Acute Toxicity:

Fish: Low toxicity: LC/EC/IC50 > 100 mg/l

Aquatic Invertebrates: Low toxicity: LC/EC/IC >100 mg/l

Algae: Low Toxicity: LC/EC/IC >100 mg/l

Microorganisms: Low Toxicity: LC/EC/IC >100 mg/l

Mobility: Dissolves in water. If product enters soil, it will be highly mobile and may contaminate ground water.

Persistence/degradability: Readily biodegradable. Oxidises rapidly by photo-chemical reactions with air.

Bioaccumulation: Does not bioaccumulate significantly.

13 DISPOSAL CONSIDERATIONS

Ethylene Glycol

MSDS Number: 7200, 7201, 7214, 7215

Revision Date: May 7, 2010

Page 5 of 6

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for toxicity and possible reactivity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14 TRANSPORT INFORMATION

US DOT Classification (49CFR)

Identification Number: NA 3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Technical Name: (Ethylene Glycol)
Class/Division: 9
Packing Group: III
Reportable Quantity: 5,000 lbs
ERG page number: 171

Canadian Road and Rail Shipping Classification

NOT REGULATED

IMDG

NOT REGULATED

IATA/CAO

NOT REGULATED

15 REGULATORY INFORMATION

OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA 29CFR 1910.1200

SARA Hazardous Categories Section 311/312 (EPCRA):

Immediate (Acute): yes
Delayed (Chronic): yes
Fire: no
Reactive: no
Sudden Release: no

SARA Toxic Release Inventory Section 313 (TRI):

Component	Cas	Percentage
Ethylene Glycol	107-21-1	100%

CERCLA

Component	Cas	Reportable Quantity
Ethylene Glycol	107-21-1	5,000 lbs

California Safe Water Drinking and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other



Ethylene Glycol

MSDS Number: 7200, 7201, 7214, 7215

Revision Date: May 7, 2010

Page 6 of 6

reproductive harm.

Notification Status

AICS (AU)	Listed	
DSL (CA)	Listed	
IECS (CN)	Listed	
ENCS/ISHL (JP)	Listed	(2)-230
TSCA (US)	Listed	
EINECS (EU)	Listed	203-473-3
KECI (KR)	Listed	KE-13169
PICCS (PH)	Listed	
NZIoC (NZ)	Listed	

COMPONENT / (CAS/PERC) / CODES

*Ethylene glycol (107211 >99%) CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

EC Classification: Harmful

EC Symbol: Xn Harmful

EC Risk Phase: R 22

REGULATORY KEY DESCRIPTIONS

CERCLA = Superfund clean up substance

HAP = Hazardous Air Pollutants

MASS = MA Massachusetts Hazardous Substances List

NJHS = NJ Right-to-Know Hazardous Substances

OSHA = OSHA workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

SARA313 = SARA 313 Title III Toxic Chemicals

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

16

OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

END OF MSDS DOCUMENT