

KOSTherm HD TEG

MSDS Number: 2505

Revision Date: May 28, 2010

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

KOST USA, Inc
1000 Tennessee Ave.

Cincinnati, OH 45229

Contact: Customer Service
Telephone Number: (800) 661-9391
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Product Name: KOSTherm HD TEG
Revision Date: May 28, 2010
Version: 1
MSDS Number: 2505
Common Name: Mixture
CAS Number: Mixture
Product Code: 2505
Chemical Family: Mixture
Product Use: Gas Dehydration Fluid

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

2 HAZARDS IDENTIFICATION

Route of Entry: Eyes; Skin; Ingestion; Inhalation;
Target Organs: Kidneys
Inhalation: Can cause irritation and inflammation of the respiratory tract.
Skin Contact: May cause irritation.
Eye Contact: Moderately irritating. Vapour or mist may cause irritation
Ingestion: Harmful if swallowed. May cause irritation and damage to mouth, throat and stomach. May cause drowsiness and dizziness.

HMIS® Rating H*2/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
112276	>96.0%	Triethylene glycol
111466	<1.0%	Diethylene glycol
Proprietary	<3.0%	Proprietary Inhibitors

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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. Get medical attention if needed.
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 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: Treat symptomatically

5 FIRE FIGHTING MEASURES

Flash Point:	166°C (331°F)
Flash Point Method:	PMCC
Autoignition Temperature:	323°C (613°F)
LEL:	0.9% volume
UEL:	9.2% 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 Oxides, Nitrogen Oxides, Ammonia, Isocyanates.

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 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
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Storage Requirements: processing area.
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, J | Spash Goggles, Gloves, Apron, Dust and Vapor Resp

Eyes/Face Protection: Usage of safety glasses/ Chemical splash 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
Triethylene Glycol	ACGIH	Ceiling Aerosol	100 mg/m ³

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slight yellow tint to Colorless	Boiling Point:	>280°C (>538°F)
Physical State:	Liquid	Freezing/Melting Pt.:	-7°C (19°F)
Odor:	Slight to no odor	Solubility:	Completely
pH:	9.9 (50/50 in water)	Spec Grav./Density:	1.129 @ 20°C
Vapor Pressure:	<0.01 mmHg @ 20°C		
Vapor Density:	5.2 estimate		

10 STABILITY AND REACTIVITY

Stability: Product is stable under normal conditions.

Conditions to avoid: High Temperature.

Materials to avoid (incompatibility): Strong Oxidizing Agents. Strong Acids; Strong Bases.

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Hazardous Decomposition products: Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide. Aldehydes; Keytones; Other Organic Acids

Hazardous Polymerization: Will not occur.

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TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral (LD 50): Not Available

Inhalation (LC 50): Not Available

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

Dermal Toxicity (LD 50): Not Available

Eye irritation: Moderately irritating.

Sensitation: Not expected to be a skin sensitiser

Chronic Toxicity and Carcinogenicity: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP

Repeated Dose Toxicity: Shown effects on: Kidney (Diethylen Glycol);

Mutagenicity: No evidence

Reproductive and Developmental Toxicity: Affects reproductive system in animals; considered to be secondary to other toxic effects (Diethylene Glycol). Causes foetotoxicity in animals at doses which are maternally toxic.

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ECOLOGICAL INFORMATION

Acute Toxicity:

Fish: No Data

Aquatic Invertebrates: No Data

Algae: No Data

Microorganisms: No Data

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

Persistence/degradability: No Data

Bioaccumulation: Does not bioaccumulate significantly.

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DISPOSAL CONSIDERATIONS

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,

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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)

NOT REGULATED

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):

NONE

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 reproductive harm.

Pennsylvania Right-To-Know List of Hazardous Substances

Component	Cas #	Amount
Triethylene Glycol	112-27-6	>96%
Diethylene Glycol	111-46-6	<1.0%

Component Notification Status

DSL (CA) Listed

IECS (CN) Listed

TSCA (US) Listed

COMPONENT / (CAS/PERC) / CODES



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*Diethylene glycol (111466 <1.0%) HAP, PA, TSCA

*Triethylene glycol (112276 >96.0%) HAP, PA, TSCA

REGULATORY KEY DESCRIPTIONS

HAP = Hazardous Air Pollutants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act

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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