

MATERIAL SAFETY DATA SHEET

Total Solutions
P.O. Box 240014
Milwaukee, WI 53224



GENERAL INFORMATION NUMBER: (414) 354-6417
CHEMTREC: (800) 424-9300

REVISION DATE: April 16, 2004
DATE OF ISSUE: April 19, 2004

I - Product Identification

Clean & Thaw

PRODUCT CODE: 0428

CHEMICAL FORMULATION: Glycol based deicing cleaner.

NFPA HAZARD IDENTIFICATION SYSTEM: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0
HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

II - Hazardous Ingredients

Values reported as TWA unless noted.

<u>SUBSTANCE</u>	<u>APPROX</u> <u>%</u>	<u>OSHA</u> <u>PEL</u>	<u>ACGIH</u> <u>TLV</u>	<u>EPA 40 CFR:</u>			<u>CAS #</u>
				<u>302</u>	<u>355</u>	<u>372</u>	
Ethylene Glycol	35.0-45.0	50 ppm	50 ppm	Y	N	Y	107-21-1
2-Butoxyethanol	1.00-10.0	50 ppm (skin)	20 ppm (skin)	N	N	Y	111-76-2
Sodium Hydroxide	< 2.00	2 mg/m ³ C	2 mg/m ³ C	Y	N	N	1310-73-2

Key: PEL: Permissible Exposure Limit TLV: Threshold Limit Value C: Ceiling level STEL: Short Term Exposure Limit
N/A: Not Applicable N/D: Not Determined N/E: Not Established Y: Yes N: No
302: CERCLA List of Hazardous Substances and Reportable Quantities (40 CFR 302.4).
355: SARA TITLE III / List of Extremely Hazardous Substances for Emergency Planning and Notification (40 CFR 355).
372: SARA TITLE III / List of Toxic Chemicals subject to Release Reporting (Community Right to Know) (40 CFR 372).

III - Physical Data

BOILING POINT (°F): N/D SPECIFIC GRAVITY: 1.06
VAPOR PRESSURE (mm Hg): N/D VOC CONTENT (% by weight): 1.00-10.0
VAPOR DENSITY (AIR = 1): N/D EVAPORATION RATE (WATER = 1): N/D
SOLUBILITY IN WATER: Soluble pH: 11.6
APPEARANCE AND ODOR: Clear, pink liquid; glycol odor.

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): > 200 (TEST METHOD): Closed cup.
FLAMMABLE LIMITS IN AIR (VOLUME %) UPPER: N/D LOWER: N/D
EXTINGUISHING MEDIA: Water, foam, carbon dioxide, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must be equipped with full protective gear including self-contained breathing apparatus. Cool fire exposed containers with water fog. Avoid breathing smoke or fumes.
UNUSUAL FIRE AND EXPLOSION HAZARD: None.

V - Reactivity Data

STABILITY: Stable.

INCOMPATIBILITY: Strong acids and oxidizers.

CONDITIONS TO AVOID: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None.

VI - Health Hazard Data

ROUTES OF ENTRY **INHALATION:** X **EYE CONTACT:** X **SKIN CONTACT:** X **INGESTION:** X

INGREDIENTS THAT ARE CONSIDERED BY OSHA, NTP, IARC TO BE SUSPECTED HUMAN CARCINOGENS: None

EFFECTS OF OVEREXPOSURE

IF IN EYES: Severe irritation, redness, tearing. Possible corneal injury.

IF ON SKIN: Moderate to severe irritation, chapping, defatting, burns.

IF SWALLOWED: May be harmful if swallowed. Burns to mucous membranes, CNS depression, gastrointestinal irritation, nausea, cramps, diarrhea.

IF INHALED: Respiratory tract irritation, nausea, vomiting headache, dizziness.

NOTE TO PHYSICIAN: Ethylene glycol can cause pulmonary edema. It is also toxic to kidneys and causes metabolic acidosis.

EMERGENCY AND FIRST AID PROCEDURES

IF IN EYES: Flush eyes and under eyelids with plenty of cool water for at least 15 minutes. Obtain medical attention.

IF ON SKIN: Flush area with water while removing contaminated clothing. Launder clothing separately before reuse. If irritation persists, obtain medical attention.

IF SWALLOWED: Call a physician or poison control center immediately. Rinse mouth with water. Give person one to two glasses of water. Do not induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

IF INHALED: Remove person to fresh air. Call a physician if irritation persists. If breathing has stopped administer artificial respiration. If breathing is difficult, administer oxygen.

VII - Spill or Leak Protection

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Ventilate area and remove all sources of ignition. Contain spill. Soak up spilled material with inert absorbent material and place in a properly labeled container for proper disposal.

WASTE DISPOSAL METHOD: Consult local environmental authorities.

VIII - Special Protection Information

RESPIRATORY PROTECTION: Use with adequate ventilation. If recommended Exposure Limits are exceeded wear a NIOSH approved respirator, following manufacturer's recommendations.

VENTILATION

LOCAL: Recommended

MECHANICAL: Not required

PROTECTIVE GLOVES: Chemical resistant.

EYE PROTECTION: Chemical goggles or face shield.

OTHER PROTECTIVE EQUIPMENT: Eye wash station.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place away from acids. Keep container tightly closed when not in use. Do not mix with other cleaning chemicals.

OTHER PRECAUTIONS: Keep out of reach of children.

IX - Transportation Information (ground transportation only)

DOT PROPER SHIPPING NAME: Compounds, cleaning liquid (sodium hydroxide)

DOT CLASS: 8

DOT ID NUMBER: NA1760

DOT PACKING GROUP: III

The shipping information listed above applies only to non-bulk (< 119 gallons) containers of this product. This product may have more than one proper shipping name depending on packaging, product properties, & mode of shipment. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may apply.

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