

MATERIAL SAFETY DATA SHEET

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

REVISION DATE: June 24, 2004
DATE OF ISSUE: July 2, 2004

I - Product Identification

Tower Treat "S"

PRODUCT CODE: 1935

CHEMICAL FORMULATION: Cooling tower treatment.

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.

SUBSTANCE	APPROX %	OSHA PEL	ACGIH TLV	EPA 40 CFR:			CAS #
				302	355	372	
Potassium hydroxide	1.00-10.0	2 mg/m ³ C	2 mg/m ³ C	Y	N	N	1310-58-3

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 (WATER = 1): 1.10

VAPOR PRESSURE (mm Hg): N/D

VOC CONTENT (% by weight): N/A

VAPOR DENSITY (AIR = 1): N/D

EVAPORATION RATE (WATER = 1): N/D

SOLUBILITY IN WATER: Soluble

pH: 12.50 - 13.00

APPEARANCE AND ODOR: Clear, yellow liquid; mild odor.

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): > 212

(TEST METHOD):

FLAMMABLE LIMITS IN AIR (VOLUME %)

UPPER: N/D

LOWER: N/D

EXTINGUISHING MEDIA: Water fog, foam, carbon dioxide, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Cool fire exposed containers with water fog. Firefighters should be equipped with full protective gear including self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARD: None

V - Reactivity Data

STABILITY: Stable

INCOMPATIBILITY: Strong acids, oxidizers and reducing agents.

CONDITIONS TO AVOID: Excess heat and open flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce oxides of phosphorus, nitrogen and or 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: Moderate to severe irritation, possible corneal injury.

IF ON SKIN: Moderate to severe irritation, defatting, redness, burns and destruction of tissue, depending on length of exposure.

IF SWALLOWED: DANGER-Harmful or fatal if swallowed. Severe burns to mucous membranes.

IF INHALED: Irritation to upper respiratory tract.

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: Wash with soap and water. Repeat washing Remove contaminated clothing and launder separately before reuse. If irritation persists, obtain medical attention.

IF SWALLOWED: Contact physician or poison control center immediately. Do not induce vomiting. Rinse with copious amounts of water or milk, first. Irrigate the esophagus and dilute stomach contents by slowly giving 1 to 2 glasses of water or milk. Avoid giving alcohol or alcohol related products. Never give anything to an unconscious person.

IF INHALED: Remove person to fresh air. Obtain medical attention.

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 marked closed container for proper disposal.

WASTE DISPOSAL METHOD: Consult local environmental authorities.

VIII - Special Protection Information

RESPIRATORY PROTECTION: Use with adequate ventilation. Do not breathe vapors or mists. 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: Protective clothing. Eye wash station.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place away from heat, open flame or acidic material. Keep container tightly closed when not in use. Always add this product to water, never add water to this product.

OTHER PRECAUTIONS: Keep out of reach of children.

IX - Transportation Information (ground transportation only)

DOT PROPER SHIPPING NAME: Corrosive Liquids, N.O.S. (Potassium Hydroxide)

DOT CLASS: 8

DOT ID NUMBER: UN1760

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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