

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
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I - Product Identification

Steam Treat

PRODUCT CODE: 1928

CHEMICAL FORMULATION: Steam boiler condensate alkaline solution.

NFPA HAZARD IDENTIFICATION SYSTEM: HEALTH: 2 FLAMMABILITY: 2 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 | |
| Cyclohexylamine | 1.00-10.0 | 10 ppm | 10 ppm | N | N | N | 108-91-8 |
| N,N-Diethylethanolamine | 1.00-10.0 | 10 ppm (skin) | 2 ppm (skin) | N | N | N | 100-37-8 |

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): 0.99
VAPOR PRESSURE (mm Hg): N/D VOC CONTENT (% by weight): N/D
VAPOR DENSITY (AIR = 1): N/D EVAPORATION RATE (WATER = 1): N/D
SOLUBILITY IN WATER: Soluble pH: 11.25-12.25
APPEARANCE AND ODOR: Clear, colorless liquid; amine odor

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): 154 (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: 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 oxidizers and acids.**CONDITIONS TO AVOID:** Excess heat and open flame.**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may produce oxides of carbon and nitrogen.**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:** Corrosive-May cause severe irritation, redness, tearing and permanent damage.**IF ON SKIN:** Corrosive-May cause moderate to severe irritation, burns.**IF SWALLOWED:** Gastrointestinal irritation, nausea, vomiting. Harmful or fatal if swallowed.**IF INHALED:** Irritation to upper respiratory tract, headache nausea.**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. Continue flushing for at least 15 minutes. Launder clothing separately before re-use. If irritation persists, obtain medical attention.**IF SWALLOWED:** Contact physician or poison control center immediately. Rinse mouth with water and give affected person 1 to 2 glasses of water. Do not induce vomiting unless instructed by a physician of poison control center. Never give anything to an unconscious person.**IF INHALED:** Remove person to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult, administer oxygen. 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:** Eye wash station, protective clothing.**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Store in a cool, dry place, away from heat, open flame or acids. Always add this product to water, never add water to this product. Wash thoroughly after handling. Keep container tightly closed when not in use.**OTHER PRECAUTIONS:** Keep out of reach of children.

IX - Transportation Information (ground transportation only)

DOT PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (2-Diethylaminoethanol, Cyclohexylamine)**DOT CLASS:** 8**DOT ID NUMBER:** UN3267**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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