

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: June 24, 2004
DATE OF ISSUE: July 1, 2004

I - Product Identification

Boiler Treat "S"

PRODUCT CODE: 1958

CHEMICAL FORMULATION: Steam boiler treatment.

NFPA HAZARD IDENTIFICATION SYSTEM: HEALTH: 2 FLAMMABILITY: 0 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	1.00-5.00	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): 1.07
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: 13.00-14.00
APPEARANCE AND ODOR: Clear, brown liquid; characteristic odor.

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): None (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:** Acidic materials.**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, burns and destruction of tissue.**IF ON SKIN:** Moderate to severe irritation, defatting, redness, burns and destruction of tissue, depending on length of exposure.**IF SWALLOWED:** Gastrointestinal irritation, cramps, burns to mucous membranes. Harmful or fatal if swallowed.**IF INHALED:** Severe irritation of respiratory tract, pulmonary edema, laryngeal spasms.**EMERGENCY AND FIRST AID PROCEDURES****IF IN EYES:** Flush eyes and under eyelids with plenty of cool water for at least 15 minutes. Obtain immediate medical attention, and continue flushing until assistance arrives.**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 irritation persists, obtain medical attention.

VII - Spill or Leak Protection

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Ventilate area and contain spill. Soak up spilled material with inert absorbent material and place in a properly labeled closed container.**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:** Protective clothing and eye wash station.**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Store in a cool, dry place away from 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.

REVISION DATE: June 24, 2004

Prepared by: PMR

DATE OF ISSUE: July 1, 2004

This information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Total Solutions assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material such vendees or users assume all risks associated with the use of this material.