

# Material Safety Data Sheet

Hazard Rating:	NFPA	CODE TRANSLATION
Health:	2	0 = Minimal Hazard
Flammability:	0	1 = Slight Hazard
Reactivity:	1	2 = Moderate Hazard
Special:		3 = Severe Hazard
		4 = Extreme Hazard

## FORMULA 2180

### SECTION I: IDENTIFICATION

Effective Date: 9/30/86

Revised: SEPTEMBER 30, 2003

Name and Address:

Phone:

Emergency Phone: CHEMTREC (800 ) 424-9300

Chemical Name: NOT APPLICABLE

Formula: SEE SECTION II

Synonyms: N.A.

Chemical Family: BOILER WATER TREATMENT

D.O.T. Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE)

D.O.T. Hazard Class: 8

ID NO.: UN-1719

Packing Group: PG-II

(ERG-60)

### SECTION II: INGREDIENTS

A. Hazardous Ingredients	CAS NO.	%	TLV
SODIUM HYDROXIDE (AS Na <sub>2</sub> O)	1310-73-2	<25.0	2mg/m <sup>3</sup> /15M
B. Other Ingredients		%*	TLV
CARBOXYLATED METHACRYLIC ESTER		M	NONE ESTAB.
SULFONATED COPOLYMER ESTER		M	NONE ESTAB.
ORGANIC CHELATING ESTER		L	NONE ESTAB.
LIGNOSULFONATE ESTER		L	NONE ESTAB.

\*Legend: L=<1%; M=1-10%; H=>10%

### SECTION III: PHYSICAL PROPERTIES

Boiling Point: >212°F

Specific Gravity: 1.317-1.325

Percent Volatile (volume): >65

pH (undiluted): >13.5

Vapor Pressure (mm Hg): N.A.

Solubility in Water: COMPLETE

Vapor Density (air=1): <1

Evaporation Rate (water=1): 1.0

Appearance and Odor: DARK BROWN LIQUID WITH PRACTICALLY NO ODOR

### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): NONE

Flammable Limits in Air (lower): N.A.

(upper): N.A.

Extinguishing Media: WATER OR ANY MEDIA SUITABLE FOR THE SURROUNDING FIRE.

Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR NORMAL PROTECTIVE EQUIPMENT. SELF-CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR CONFINED AREAS. AVOID DIRECT CONTACT WITH WATER. SEE SECTION VII, B.

Unusual Fire or Explosion Hazards: NONE KNOWN

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### SECTION V: HEALTH HAZARD DATA

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A. TLV and Source: CALCULATED  $>7\text{mg}/\text{m}^3$  BASED ON THE  $\text{Na}_2\text{O}$  CONTENT.

B. Effects of a Single Overexposure by:

1. Ingestion: IF SWALLOWED, CAN CAUSE SEVERE BURNS OR COMPLETE PERFORATION THE TISSUES OF THE MOUTH, THROAT, ESOPHAGUS AND STOMACH.
2. Inhalation: BREATHING OF DUST MAY BE IRRITATING, A STINGING SENSATION MAY BE EXPERIENCED. MAY CAUSE DAMAGE TO THE UPPER RESPIRATORY TRACT AND LUNGS UNDER SEVERE CONDITIONS.
3. Skin Contact: PROLONGED CONTACT CAUSES SEVERE IRRITATION OR BURNS.
4. Eye Contact: DESTRUCTIVE TO EYE TISSUES ON CONTACT. SEVERE CONTACT COULD RESULT IN BLINDNESS.

C. Effects of Repeated Overexposures: CORROSIVE TO ALL BODY TISSUES TO WHICH IT COMES IN CONTACT. THE CHRONIC LOCAL EFFECT MAY CONSIST OF MULTIPLE AREAS OF SUPERFICIAL DESTRUCTION OF THE SKIN OR PRIMARY DERMATITIS. SIMILARLY, INHALATION OF THE DUST OR MIST MAY RESULT IN VARYING DEGREES OF IRRITATION OR DAMAGE TO THE UPPER RESPIRATORY TRACT TISSUES AND AN INCREASED SUSCEPTIBILITY TO RESPIRATORY ILLNESS.

D. Emergency and First Aid Procedures for:

1. Ingestion: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DRINK SEVERAL GLASSES OF MILK, IF AVAILABLE, OR WATER AND GET IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING BUT IF IT OCCURS SPONTANEOUSLY, KEEP THE AIRWAY CLEAR.
2. Inhalation: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, START RESUSCITATION IMMEDIATELY AND IF AVAILABLE, GIVE OXYGEN WHEN BREATHING STARTS. GET MEDICAL ATTENTION IMMEDIATELY.
3. Skin Contact: IMMEDIATELY WASH WITH SOAP AND WATER OR PLAIN WATER. CHANGE AND LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. CONTAMINATED SHOES MAY HAVE TO BE DISCARDED.
4. Eye Contact: IMMEDIATELY FLUSH WITH CLEAR WATER FOR 15 MINUTES AND GET MEDICAL ATTENTION. BE CERTAIN TO HOLD EYELIDS APART WHEN FLUSHING TO ASSURE COMPLETE DECONTAMINATION.

E. Other Health Information: THE TOXIC EFFECTS OF EXPOSURE TO CAUSTIC SODA ARE DUE PRIMARILY TO ITS EXTREME CORROSIVITY TO TISSUES. MEDICAL TREATMENT WILL BE REQUIRED WITH **URGENCY** FOR ALL CASES OF OVEREXPOSURE.

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### SECTION VI: PERSONNEL PROTECTION DATA

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Respiratory Protection: NOT NORMALLY REQUIRED WHERE ADEQUATE VENTILATION IS PROVIDED.

Ventilation: USE ADEQUATE LOCAL MECHANICAL VENTILATION TO PREVENT EXPOSURES TO CONCENTRATIONS EXCEEDING THE RECOMMENDED EXPOSURE LIMITS FOR DUST OR MIST.

Protective Gloves: CHEMICAL RESISTANT

Eye Protection: GOGGLES AND FACE SHIELD OR MONOGOGGLES.

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Other Protective Equipment: EYEWASH STATION AND SAFETY SHOWER IN AREA OF USE. HARD HAT, RUBBER APRON AND BOOTS SHOULD BE WORN BY WORKERS HANDLING THE MATERIAL.

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### SECTION VII: REACTIVITY DATA

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- A. Product Stability: STABLE  
Conditions to Avoid: CONTACT WITH WATER, STRONG ACIDS OR OXIDIZING AGENTS.
- B. Incompatibility: CONTACT WITH WATER, CONCENTRATED ACIDS OR OXIDIZING AGENTS MAY RESULT IN VIOLENT REACTIONS. CONTACT WITH ALUMINUM, TIN OR ZINC, OR ALLOYS CONTAINING THESE METALS SHOULD BE AVOIDED. WHEN DILUTING WITH WATER, ALWAYS ADD PRODUCT SLOWLY TO WATER AND NOT WATER TO PRODUCT WHICH COULD RESULT IN EXCESSIVE HEAT GENERATION, DANGEROUS BOILING, AND SPATTERING.
- C. Hazardous Combustion or Decomposition Products: OXIDES OF CARBON, NITROGEN, AND SULFUR MAY BE RELEASED IF WATER IS EVAPORATED BY THE HEAT OF A FIRE.
- D. Hazardous Polymerization: WILL NOT OCCUR  
Conditions to Avoid: NONE KNOWN

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### SECTION VIII: ENVIRONMENTAL DATA

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- A. Spill or Leak Procedures: SMALL SPILL MAY BE ABSORBED IN SAWDUST OR OTHER SUITABLE ABSORBENT. LARGER SPILLS SHOULD BE DIKED TO PREVENT RUNOFF AND THE MATERIAL PUMPED INTO A SUITABLE CONTAINER. THE AREA MAY THEN BE FLUSHED WITH COPIOUS QUANTITIES OF WATER. SWEEPINGS CONSTITUTE A HAZARDOUS WASTE AND MUST BE DISPOSED OF ACCORDINGLY.
- B. Waste Disposal: SMALL QUANTITIES MAY BE DILUTED WITH WATER, NEUTRALIZED AND FLUSHED TO A SANITARY SEWER. LARGER QUANTITIES MUST BE TREATED AS A HAZARDOUS WASTE AND ALL FEDERAL, STATE OR LOCAL REGULATIONS MUST BE OBEYED.
- C. Other Environmental Data: CALCULATED AQUATIC TOXICITY FOR THE PRODUCT >500ppm. THE MATERIAL IS HAZARDOUS DUE TO ITS HIGH ALKALINITY AND CORROSIVITY TO ANIMAL TISSUES AND CERTAIN METALS.

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### SECTION IX: SPECIAL PRECAUTIONS

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- A. Signal Word: **DANGER**
- B. Statement of Hazards: CAUSES SEVERE BURNS TO SKIN AND EYES. CONTACT WITH EYES CAN CAUSE PERMANENT EYE DAMAGE. INHALATION OF DUST, MIST OR SPRAY CAN CAUSE SEVERE LUNG DAMAGE.
- C. Precautionary Statements: DO NOT GET INTO EYES, ON SKIN OR CLOTHING. AVOID BREATHING DUSTS, MISTS OR SPRAY. **DO NOT TAKE INTERNALLY.** USE WITH ADEQUATE VENTILATION AND EMPLOY RESPIRATORY PROTECTION WHEN EXPOSURE TO MIST, DUST OR SPRAY IS POSSIBLE. WHEN HANDLING, WEAR CHEMICAL SPLASH GOGGLES, FACE SHIELD, RUBBER GLOVES AND PROTECTIVE CLOTHING. WASH THOROUGHLY AFTER HANDLING OR CONTACT. EXPOSURE CAN CAUSE BURNS WHICH ARE NOT IMMEDIATELY PAINFUL OR VISIBLE. PRODUCT CAN REACT VIOLENTLY WITH WATER, ACIDS AND OTHER SUBSTANCES. READ ALL

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### SPECIAL HANDLING INSTRUCTIONS BEFORE USING.

- D. Handling and Storage: STORE IN A COOL DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE.
- E. Other Precautions: THIS PRODUCT HAS BEEN DESIGNED FOR USE IN SPECIFIC TYPES OF BOILER WATER SYSTEMS AND SHOULD BE USED ONLY IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BY THE TECHNICAL REPRESENTATIVE SERVICING THE FACILITY. IT MAY NOT BE USED FOR THE TREATMENT OF POTABLE WATERS. THE PRODUCT IS NOT APPROVED FOR USE IN BOILERS WHERE STEAM CAN CONTACT FOOD OR OTHER EDIBLE PRODUCT.

The data contained in this Material Safety Data Sheet has been prepared based upon an evaluation of the ingredients contained in the product, their concentration in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required. The information is furnished to comply with the "Occupational Safety and Health Act" (OSHA) hazard communication regulation [Rule 29 CFR 1910.1220 (g) (2)]. Use or dissemination of all or part of this information for any other purpose is not permitted.