

MATERIAL SAFETY DATA SHEET

QUICK REFERENCE:

B-750



H-O-H CHEMICALS, INC.
 500 SOUTH VERMONT STREET
 PALATINE, ILLINOIS 60067

EMERGENCY PHONE No's

708-358-7400 (H-O-H BUSINESS Hrs.)
 800-424-9300 (CHEMTREC - 24 Hrs.)

H.M.I.S.:

4 = EXTREME
 3 = SEVERE
 2 = MODERATE
 1 = SLIGHT
 0 = INSIGNIFICANT

HEALTH 3

FLAMMABILITY 0

REACTIVITY 1

DOT:

HAZARD LABELING

IN DOT APPROVED STEEL CONTAINERS



PRODUCT IDENTIFICATION	PRODUCT NAME	CHEMICAL FAMILY	DATE	Rev. No.	SUPERSEDES	EPA - T P Q	BY
	B-750	BOILER WATER TREATMENT	1-1-91	1	1-1-90	NA	

HAZARDOUS COMPONENTS	CHEMICAL NAME	COMMON NAME	CAS No.	PERCENT	OSHA PEL	ACGIH-TLV	OTHER
	SODIUM HYDROXIDE	LYE, CAUSTIC SODA	1310-73-2	50.0	2 mg/m ³	2 mg/m ³	OSHA Cel. 2 mg / m ³

COMMENT
1. NEVER ADD WATER TO THIS PRODUCT. IN MAKING DILUTIONS, ALWAYS ADD PRODUCT SLOWLY TO WATER WITH VIGOROUS MIXING OR AGITATION. 2. THE PERMISSIBLE FEDERAL EXPOSURE STANDARD FOR PURE SODIUM HYDROXIDE IN AIR IS 2 mg/m ³ . NO CRITERIA HAS BEEN SET FOR WATER. 3. NOTE: TOTAL PLANT USE OF SUFFICIENT SODIUM HYDROXIDE MAY REQUIRE ANNUAL REPORTING UNDER SARA TITLE III. 4. 50% SODIUM HYDROXIDE WILL IRREVERSEABLY CRYSTALLIZE IF STORED AT OR EXPOSED FOR LENGTHY PERIODS OF TIME TO TEMPERATURES BELOW 55° F. 5. THIS PRODUCT IS APPROVED FOR USE IN FOOD PROCESSING PLANTS SUBJECT TO THE UNITED STATES DEPARTMENT OF AGRICULTURE MEAT AND POULTRY INSPECTION PROGRAM WHERE STEAM CONTACTS EDIBLE PRODUCTS.

PHYSICAL DATA	BOILING POINT (Degrees Fahrenheit)	290°	SOLUBILITY (in water)	MISCIBLE	EVAPORATION RATE (water = 1.0)	< 1.0
	VAPOR PRESSURE (in millimeters of Mercury)	WATER	SPECIFIC GRAVITY (water = 1.0)	1.536		
	VAPOR DENSITY (air = 1.0)	NA	PERCENT (%) VOLATILE (by volume)	NA		
	APPEARANCE and ODOR	CLEAR, WATER WHITE LIQUID WITH NO NOTICEABLE ODOR				

FIRE AND EXPLOSION	FLASH POINT (Degrees Fahrenheit)	METHOD	FLAMMABLE LIMITS	LOWER EXPLOSIVE LIMIT	UPPER EXPLOSIVE LIMIT
	NONE	NA		NOT APPLICABLE	NOT APPLICABLE
	EXTINGUISHING MEDIA	SPECIAL FIRE FIGHTING PROCEDURES	UNUSUAL FIRE AND EXPLOSION HAZARDS		
	WATER COOL CONTAINERS TO PREVENT RUPTURE. CONTAIN ANY SPILLS TO AVOID REACTIONS THAT MAY GENERATE HEAT. THIS PRODUCT WILL NOT BURN OR DIRECTLY PROMOTE FIRE.	CONTAIN SPILLS IF SPILLED, REACTIONS MAY OCCUR WITH METALS, CERTAIN BUILDING MATERIALS, OR VARIOUS STORED MATERIALS. SODIUM HYDROXIDE REACTS STRONGLY WITH ALUMINUM WITH THE PRODUCTION OF FLAMMABLE HYDROGEN GAS. SIMILAR, BUT LESS ENERGETIC REACTIONS OCCUR WITH ZINC (GALVANIZED METAL) AND TIN.	SECONDARY REACTIONS UNDER NORMAL CONDITIONS THIS PRODUCT WILL NOT SUPPORT COMBUSTION OR ACCELERATE A FIRE. IF CONTACT WITH BUILDING MATERIALS, OTHER CHEMICALS, OR LIVE ELECTRICAL SERVICES OCCURS DURING A FIRE, UNPREDICTABLE HEAT, HAZARDOUS GASES, OR ELECTRICAL ARCS MAY BE PRODUCED.		

REACTIVITY DATA	STABILITY	CONDITIONS TO AVOID	NOT APPLICABLE
	STABLE <input checked="" type="checkbox"/> UNSTABLE <input type="checkbox"/>		
	INCOMPATIBILITY (Materials to Avoid)	METALS (SUCH AS ALUMINUM, TIN, AND ZINC), ACIDS, BROMINE AND CHLORINE RELEASE AGENTS.	
	HAZARDOUS DECOMPOSITION PRODUCTS	NONE.	
	HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID	NOT APPLICABLE
	WILL OCCUR <input type="checkbox"/> WON'T OCCUR <input checked="" type="checkbox"/>		

SPECIAL PRECAUTIONS	STORAGE AND HANDLING	OTHER
	1. PROTECT CONTAINERS AGAINST PHYSICAL DAMAGE. 2. STORE IN A COOL, DARK, WELL-VENTILATED LOCATION AWAY FROM DIRECT SUNLIGHT AND OTHER SOURCES OF RADIANT HEAT. 3. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. <u>NEVER</u> MOVE AN OPEN OR LOOSELY CLOSED CHEMICAL CONTAINER. 4. WEAR HAND AND FOOT PROTECTION WHEN MOVING HEAVY CONTAINERS. 5. STORE AT 60° F. OR HIGHER.	1. NOT TO BE TAKEN INTERNALLY. 2. NOT TO BE USED FOR OTHER THAN SPECIFIED PURPOSE. 3. KEEP AWAY FROM CHILDREN. 4. <u>NEVER</u> MIX THIS MATERIAL WITH ANY OTHER CHEMICAL UNLESS AT THE SPECIFIC DIRECTION OF H-O-H PERSONNEL 5. TRIPLE RINSE EMPTY CONTAINERS BEFORE OFFERING FOR DISPOSAL OR SALVAGE. <u>NEVER</u> REUSE EMPTY CONTAINERS.

HEALTH HAZARD DATA	THRESHOLD LIMIT VALUE	4 mg/m ³ (AIR) BASED ON A MIST OF B-750 IN AIR, RELATIVE TO PURE SODIUM HYDROXIDE. LD ₅₀ (Oral - Rat) = 140 TO 340 mg/kg
	ACUTE HEALTH HAZARDS	CHRONIC HEALTH HAZARDS
	TISSUE BURNS STRONGLY CORROSIVE TO ALL BODY TISSUES WITH WHICH IT COMES IN CONTACT.	NONE BURNS CAN BE SLOW TO HEAL, BUT NO CHRONIC HEALTH HAZARDS ARE INVOLVED. FREQUENT EXPOSURE TO LEVELS MODERATELY IN EXCESS OF THE T L V MAY PRODUCE SYMPTOMS, BUT IF EXPOSURE IS ELIMINATED, SYMPTOMS SHOULD DISAPPEAR.

EFFECTS OF EXPOSURE	SKIN AND EYES / TARGET ORGAN	INHALATION / TARGET ORGAN	INGESTION / TARGET ORGAN
	BURNS CAUSES HIGHLY PAINFUL INSTANTANEOUS IRRITATION OF EYES AND EYELIDS. MAY CAUSE ULCERATION OR PERFORATION OF EYES OR EYELIDS, LOSS OF EYES OR EYESIGHT. CAUSES ULCERATION OF SKIN WITH SUPPURY, SOAPY FEELING. IRREPARABLE DAMAGE POSSIBLE.	NON - VOLATILE IF A MIST OR SPRAY OF CONCENTRATED PRODUCT IS DRAWN INTO THE BREATHING TRACT, SEVERE IRRITATION OF RESPIRATORY TRACT, PULMONARY EDEMA, MAY OCCUR. NASAL, MUCOUS, AND BRONCHIAL TISSUE MAY BE BURNED AND / OR PERMANENTLY DAMAGED.	CAUSES ULCERATION, BLEEDING, AND SCARRING OF THE DIGESTIVE TRACT. SHOCK, CONVULSIONS, COMA, AND DEATH MAY RESULT DEPENDING ON THE AMOUNT INGESTED. COFFEE - GROUND - LIKE MATERIAL PRODUCED WITH VOMITING INDICATES DIGESTIVE BLEEDING.
CONDITIONS AGGRAVATED	DERMATITIS, BUSTERS, BURNS, OR ANY PRE-EXISTING SKIN IRRITATION IF CONTACT OCCURS.	IN NORMAL USE, NO EFFECT SHOULD BE NOTED SINCE NO VOLATILE COMPONENT IS PRESENT.	IN NORMAL USE, INGESTION SHOULD NOT OCCUR. INGESTION WILL PRODUCE IMMEDIATE TRAUMA.

EMERGENCY PROCEDURES	SKIN AND EYES	INHALATION	INGESTION
	EYES FLUSH EYES WITH WATER FOR AT LEAST 20 MINUTES HOLDING EYELIDS OPEN. GET IMMEDIATE MEDICAL ATTENTION. SKIN FLUSH WITH WATER FOR 15 MINUTES. TREAT FOR BURNS. OBTAIN MEDICAL ADVICE. REMOVE EXPOSED CLOTHING AND WASH WELL BEFORE REUSE. CONTINUE TO WASH WITH LUKE - WARM WATER UNTIL THE FEELING OF STICKINESS OR SOAPINESS DISAPPEARS, UP TO AN HOUR MAY BE NEEDED.	NON - VOLATILE IF LIQUID OR CONCENTRATED SPRAY OR MIST IS INHALED, REMOVE SUBJECT TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GIVE OXYGEN BY PROPERLY TRAINED PERSONNEL IF BREATHING IS DIFFICULT. KEEP SUBJECT WARM AND AT REST. OBTAIN EMERGENCY MEDICAL ATTENTION. DO NOT LEAVE PERSON UNATTENDED. ENCOURAGE NOSE BLOWING, COUGHING, AND SPITTING - OUT.	DO NOT INDUCE VOMITING IF CONSCIOUS, DILUTE INGESTED MATERIAL WITH 2 OR MORE GLASSES OF WATER OR MILK. OBTAIN EMERGENCY MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. INDUCED VOMITING IS NOT RECOMMENDED DUE TO POSSIBLE BRONCHIAL OR PULMONARY INGESTION. EMERGENCY MEDICAL ATTENTION IS REQUIRED TO REMOVE ANY INGESTED CAUSTIC AND MINIMIZE INTERNAL BURNS AND TISSUE DAMAGE.

CARCINOGEN LISTING	NATIONAL TOXICOLOGY PROGRAM (NTP)	IARC MONOGRAPHS	O S H A REGULATED
	NO	NO	NO

SPILL OR LEAK PROCEDURES	SPILLS AND RELEASES	WASTE DISPOSAL METHODS
	REMOVE ALL IGNITION SOURCES. VENTILATE THE AREA. NOTIFY THE APPROPRIATE POLLUTION CONTROL (ESDA) AUTHORITIES IF LEAKAGE ENTERS A SEWER OR IN ANY OTHER WAY IS ESCAPING FROM THE PREMISES. COLLECT SPILLED MATERIAL INTO SUITABLE CONTAINERS FOR RECLAIM OR DISPOSAL. NEUTRALIZE WITH DILUTE SOLUTIONS OF SULFURIC, HYDROCHLORIC, OR SULFAMIC ACIDS OR SODIUM BISULFATE. WHEN NEUTRALIZING WITH DILUTE ACID, BE CAREFUL FOR HEAT GENERATION AND POSSIBLE OVER NEUTRALIZATION LEADING TO ACIDIC CONDITIONS.	CONSULT FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WASTE DISPOSAL.

CONTROL MEASURES	EYE PROTECTION	TIGHT - FITTING CHEMICAL GOGGLES AND FACE SHIELD.		
	RESPIRATORY PROTECTION	NOT REQUIRED FOR ORDINARY USE. DURING EMERGENCY CONDITIONS OR IF A SERIOUS SPILL OCCURS, AN AIR PURIFYING RESPIRATOR DESIGNED TO ABSORB ALKALINE VAPORS (AMMONIA, AMINES, ETC.) AND CHLORINE SHOULD BE USED.		
	OTHER PROTECTIVE EQUIPMENT	IMPERMEABLE CLOTHING. SAFETY SHOWERS AND EYEWASH FOUNTAINS SHOULD BE INSTALLED IN STORAGE AND HANDLING AREAS.		
	LOCAL EXHAUST	YES	SPECIAL VENTILATION	NOT REQUIRED FOR NORMAL USE.
	MECHANICAL VENTILATION	NOT REQUIRED FOR NORMAL USE.	OTHER VENTILATION	NOT REQUIRED FOR NORMAL USE.
	PROTECTIVE GLOVES	NON - SUP VINYL OR RUBBER GLOVES.	PROTECTIVE CLOTHING	RUBBER OR VINYL APRON.

REFERENCES	1. <i>Threshold Limit Values For Chemical Substances And Physical Agents In The Work Environment</i> ; ACGIH, 1989.
	2. <i>O S H A Safety and Health Standards</i> ; 29CFR 1900 to 1910, July 1, 1988
	3. <i>Fifth Annual Report on Carcinogens</i> ; U. S. Dept. of Health and Human Services, National Toxicology Program, 1989 (Summary).
	4. M. Sittig, <i>Handbook of Toxic & Hazardous Chemicals</i> , (Noyes Publications, Park Ridge, N. J., 1981).
	5. <i>Community Right - To - Know Manual</i> , (Thompson Publishing Group, Washington, D. C., 1990).
	6. <i>Right - To - Know / Chemical Manual</i> (ILLINOIS MANUFACTURES ASSOCIATION; Rooks, Pitts, and Poust, 1990).
	7. <i>Toxic and Hazardous Industrial Chemicals Safety Manual</i> (THE INTERNATIONAL TECHNICAL INFORMATION INSTITUTE, 1975).
	8. M. J. Lefevre, S. A. Conibear, <i>First Aid Manual for Chemical Accidents</i> , 2nd ed. (Van Nostrand Reinhold, New York, 1989).
	9. <i>Hazardous Materials Guide; Shipping, Materials Handling and Transportation</i> (J. J. KELLER & ASSOCIATES, Inc., Neenah, Wisconsin, Dec. 1990)
	10. <i>Hazard Communication Guide; Federal & State Right to Know Standards</i> (J. J. KELLER & ASSOCIATES, Inc., Neenah, Wisconsin, Dec. 1990)

REPORTABLE QUANTITY	IF MORE THAN THE INDICATED QUANTITY IS DISCHARGED TO DRAINAGE (Sewer / surface water), AIR, OR SOIL, IMMEDIATELY REPORT AS INDICATED.		
	CERCLA OR EPA (Extremely Hazardous) NATIONAL RESPONSE CENTER (800 - 424 - 8802)	STATE EMERGENCY RELEASE NOTIFICATION ILLINOIS (Only) 800 - 782 - 7860 (Consult for others)	LOCAL EMERGENCY RESPONSE AUTHORITY Record Telephone No. of Local Response Authority
WRITTEN REPORT MUST FOLLOW	2,000 lbs. / 155 gals. (Sodium Hydroxide in Water)	CONTACT	CONTACT