MATERIAL SAFETY DATA SHEET
Revised 12/8/06

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

BleachTech LLC
8929 Ryan Rd.
Seville, Ohio 44273
1-330-769-5000

EMERGENCY RESPONSE NUMBER:
1-330-769-5000 (24 hours)

SUBSTANCE: CAUSTIC SODA LIQUID
TRADE NAME: BleachTech Caustic Soda 20% to 30%
CHEMICAL NAME/SYNONYMS: Sodium hydroxide solution; liquid caustic; lye solution; caustic; lye; soda lye
PRODUCT USE: metal finishing, cleaner, process chemical, petroleum industry
REVISION DATE: 12/08/06

SECTION 2. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH = 3 FIRE = 0 REACTIVITY = 1
HMIS RATINGS (SCALE 0-4): HEALTH = 3 FLAMMABILITY = 0 REACTIVITY = 1

EMERGENCY OVERVIEW:
COLOR: colorless to slightly colored
PHYSICAL FORM: liquid
ODOR: odorless
SIGNAL WORD: DANGER
MAJOR HEALTH HAZARDS: CORROSIVE. CAUSES BURNS TO THE RESPIRATORY TRACT, SKIN, EYES AND GASTROINTESTINAL TRACT. CAUSES PERMANENT EYE DAMAGE.
ECOLOGICAL HAZARDS: This material has exhibited moderate toxicity to aquatic organisms.
PRECAUTIONARY STATEMENTS: Do not get in eyes, on skin, or on clothing. Do not breathe vapor or mist. Keep container tightly closed. Wash thoroughly after handling. Use only with adequate ventilation.

POTENTIAL HEALTH EFFECTS:
INHALATION: SHORT TERM EXPOSURE: irritation (possibly severe), burns, pulmonary edema
LONG TERM EXPOSURE: to our knowledge, no effects are known
SKIN CONTACT: SHORT TERM EXPOSURE: irritation (possibly severe), burns
LONG TERM EXPOSURE: dermatitis
EYE CONTACT: SHORT TERM EXPOSURE: irritation (possibly severe), burns, eye damage, blindness
LONG TERM EXPOSURE: visual disturbances
INGESTION: SHORT TERM EXPOSURE: irritation (possibly severe), burns, nausea, vomiting
LONG TERM EXPOSURE: to our knowledge, no effects are known

CARCINOGEN STATUS: OSHA: no NTP: no IARC: no

SECTION 3. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: WATER	CAS NUMBER: 7732-18-5	PERCENTAGE: 69-81
COMPONENT: SODIUM HYDROXIDE	CAS NUMBER: 1310-73-2	PERCENTAGE: 19-31
COMPONENT: SODIUM CHLORIDE	CAS NUMBER: 7647-14-5	PERCENTAGE: 0-1.0

SECTION 4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.

SKIN CONTACT: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. Discard contaminated leather goods. GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

NOTE TO PHYSICIAN: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.
EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.
FIRE FIGHTING: Move containers from fire area if it can be done without risk. Cool containers with water. Wear NIOSH approved positive-pressure self-contained breathing apparatus. Avoid contact with skin.
SENSITIVITY TO MECHANICAL IMPACT: Not sensitive
SENSITIVITY TO STATIC DISCHARGE: Not sensitive
FLASH POINT: not flammable

SECTION 6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE: Wear appropriate personal protective equipment recommended in Section 8 of the MSDS. Completely contain spilled material with dikes, sandbags, etc. Keep out of water supplies and sewers. Reprocess or reuse if possible. Liquid material may be removed with a vacuum truck. Remaining material may be diluted with water and neutralized with dilute acid. Flush spill area with water, if appropriate. This material is akaline and may raise the pH of the surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).

SECTION 7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep containers tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see Section 10 of the MSDS).

HANDLING: Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS: SODIUM HYDROXIDE:
2 mg/m3 OSHA TWA, 2 mg/m3 OSHA ceiling (vacated by 58 FR 35338, June 30, 1993), 2 mg/m3 ACGIH ceiling

VENTILATION: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear safety glasses with side shields. Wear chemical safety goggles with a faceshield or chemical splash hood to protect against skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Contaminated clothing should be removed, then discarded or laundered. Always place pants legs over boots.

GLOVES: Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES: butyl rubber, natural rubber, neoprene, nitrile, polyvinyl chloride (PVC), Tychem ®

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH: 10 mg/m3

RESPIRATOR: Where vapor concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with acid gas canister is required. If eye irritation occurs, a full face style mask should be used. When an air-purifying respirator is not adequate or when there are vapor concentrations above 10 ppm or for spills and or emergencies, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid APPEARANCE: clear to opaque COLOR: colorless to slightly colored
ODOR: odorless BOILING POINT: 230-240 F (110-115.6 C) FREEZING POINT: 28 - 34F (-2 to 1 C)
VAPOR PRESSURE: <10 mmHg @ 20 C VAPOR DENSITY (air = 1): not available
SPECIFIC GRAVITY (water = 1): 1.22 – 1.343 @ 15.6 C DENSITY: 10.1 – 11.2 lbs/gal @ 15.6 C
WATER SOLUBILITY: 100% PH: 14.0 (7.5% solution) VOLATILITY: not available
ODOR THRESHOLD: not available EVAPORATION RATE: not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: not available

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.
CONDITIONS TO AVOID: Mixing with water, acid or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars or food and beverage products in enclosed spaces.
INCOMPATIBILITIES: acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.
HAZARDOUS DECOMPOSITION: Thermal decomposition products: none known.
POLYMERIZATION: will not polymerize

SECTION 11. TOXICOLOGICAL INFORMATION

CAUSTIC SODA (ALL GRADES):
TOXICITY DATA: Sodium Hydroxide: 1350 mg/kg Dermal-rabbit LD50; 220 mg/kg (50% solution) Oral-Rat LD50. The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Inhalation will cause severe irritation, possible burns with pulmonary edema, which may lead to pneumonitis. Skin contact with this material may cause severe irritation and corrosion of tissue. Eye contact can cause severe irritation, corrosion with possible corneal damage and blindness. Ingestion may cause irritation, corrosion/ulceration, nausea, and vomiting. In general, chronic effects are due to long-term irritation. This material may cause dermatitis on the skin, or recurrent corneal ulceration and visual disturbances. In rare cases, reports have noted long-term inhalation causes bronchial inflammatory reaction or obstructive airway dysfunction.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory system (including asthma and other breathing disorders)

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA: FISH TOXICITY: This material has exhibited moderate toxicity to aquatic organisms. For sodium hydroxide: 100 ppm LC50 Daphnia; 25 ppm 24 hours LC50 Brook trout; 48 ppm LC50 King salmon; 33-100 ppm 48 hours LC50 Shrimp; 330-1000 ppm 48 hours LC50 Cockle

FATE AND TRANSPORT: BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is alkaline and may raise the pH of surface waters with low buffering capacity. This material is believed to exist in the disassociated state in the environment.

BIOCONCENTRATION: This material is believed not to bioaccumulate.

OTHER ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Reuse or reprocess if possible. Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002.

SECTION 14. TRANPORT INFORMATION

U.S. DOT 49 CFR 172.101: PROPER SHIPPING NAME: Sodium Hydroxide solution
ID NUMBER: UN1824 HAZARD CLASS OR DIVISION: 8 PACKING GROUP: II
LABELING REQUIREMENTS: 8 DOT HAZARDOUS SUBSTANCE(S): Sodium hydroxide 1000 lb(s) (454 kg(s))

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Sodium Hydroxide solution UN NUMBER: UN1824 CLASS: 8
PACKING GROUP/RISK GROUP: II

SECTION 15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): SODIUM HYDROXIDE: 1000 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: yes CHRONIC: no FIRE: no REACTIVE: no SUDDEN RELEASE: no

SARA TITLE III SECTION 313 (40 CFR 372.65): not regulated

OSHA PROCESS SAFETY (29 CFR 1910.119): not regulated

FDA: This material has Generally Recognized as Safe (GRAS) status under specific FDA regulations. Additional information is available from the Code of Federal Regulations (CFR) which is accessible on the FDA's website.

STATE REGULATIONS:
California Proposition 65: This product may contain contaminants known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act.

NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:
REPORTING REQUIREMENT:
WATER: 7732-18-5 69-71%
SODIUM HYDROXIDE 1310-73-2 19-31%

SODIUM CHLORIDE 7647-14-5 0-1.0%

RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST: SODIUM HYDROXIDE 1310-73-2 19-31%

SPECIAL HEALTH HAZARD SUBSTANCE LIST: SODIUM HYDROXIDE 1310-73-2 19-31%

PENNSYLVANIA RIGHT TO KNOW:
REPORTING REQUIREMENT:
WATER: 7732-18-5 69-81%
SODIUM HYDROXIDE 1310-73-2 19-31%
SODIUM CHLORIDE 7647-14-5 0-1.0%

HAZARDOUS SUBSTANCE LIST: SODIUM HYDROXIDE 1310-73-2 19-31%

ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST: SODIUM HYDROXIDE 1310-73-2 19-31%

SPECIAL HAZARDOUS SUBSTANCE LIST: not regulated

CANADIAN REGULATIONS:
CONTROLLED PRODUCTS REGULATIONS (CPR): This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASSIFICATION: D1B, E

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): All the components of this substance are listed on or are exempt from the inventory.

TSCA 12(b) EXPORT NOTIFICATION: not listed

CANADA INVENTORY (DSL/NDSL): All components of this product are listed on the DSL.

SECTION 16. OTHER INFORMATION

IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SUITABILITY, STABILITY OR OTHERWISE. The information included herein is not intended to be all-inclusive as to the appropriate manner and/or conditions of use, handling and/or storage. Factors pertaining to certain conditions of storage, handling, or use of this product may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended to, and nothing herein shall be construed as a recommendation to, infringe any existing patents or violate any laws, rules, regulations or ordinances of any governmental entity.