MATERIAL SAFETY DATA SHEET: BLEACH 10 MSDS# 1010016BX CENTRAZ INDUSTRIES, INC. 4051 BINGHAM AVE ST. LOUIS, MO 63116-3506

ORIGINAL DATE: 11\16\92

LATEST UPDATE: 07/24/00

PRODUCT IDENTIFICATION: MSDS CODE NUMBER: 1010016BX
PRODUCT NAME: CENTRAZ BLEACH 10 ORIGINAL DATE: 11/16/92
TRADE NAME: CONCENTRATED LAUNDRY BLEACH REVISION DATE: 07/24/00

CHEMICAL FAMILY: Sodium Hypochlorite

FORMULA: NaOCI CAS NUMBER: 7681-52-9

24 HOUR EMERGENCY RESPONSE NUMBER: CHEMTREC (800) 424-9300

IDENTIFYING MSDS NUMBER: 1010016BX
EMERGENCY RESPONSE GUIDE NO: NAERG 2000 154
PROPER SHIPPING NAME: HYPOCHLORITE SOLUTION 12%

HAZARD CLASS: 8

ID NUMBER: UN 1791
PACKING GROUP: III
REPORTABLE QUANTITY: 100 LB

"LTD QTY" EXEMPTION 173.154 - COMBINATION PACKAGES OF 4\1 AND 6\1 GALLON CASES This number is to be used only in the case of emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

S.A.R.A. INFORMATION:

HAZARDS: Fire: Y Pressure: Y Reactivity: Y Acute: N Chronic: N Vapors: Y

PHYSICAL DATA: Mixture: Y Pure: N Solids: N Liquids: Y Gas: N

SECTION I: HAZARDOUS INGREDIENTS

MATERIAL % BY WEIGHT CAS # OSHA PEL - ACGIH TLV

Sodium Hypochlorite 9.2 - 11.5 7681-52-9 N/A

Sodium Hydroxide 0.2 - 2.0 1310-73-2 2 mg/m3 ceiling

Inert Ingredients Balance N/A N/A

CARCINOGENICITY STATUS: NTP - No, IARC - No, OSHA - No.

SECTION II: HEALTH HAZARDS

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/A

INHALATION: Fumes from spills are very irritating to mucous membranes. Very little hazard from properly stored solution.

SKIN: Severe irritant, reddening of skin. skin damage.

EYE: Severe irritation; corrosive.

INGESTION: Causes irritation of membranes of the mouth, throat, and stomach pain and possible

ulceration. LD50 (oral, rat) for 12.5% NaOC1 is approximately 5 g/kg body weight.

EFFECTS OF OVEREXPOSURE: ACUTE:

SWALLOWING: See "INGESTION" under routes of exposure.

SKIN: Irritant, reddening of skin, skin damage.

INHALATION: Fumes from spills are very irritating to mucous membranes.

EYE: Extreme irritant, corrosive.

CHRONIC: EYE/SKIN: Can cause damage, chemical burns.

SECTION III: FIRST AID

EYES: If in eyes, flush with water for at least 15 minutes. Get medical attention.

SKIN: If on skin, wash with plenty of soap and water for at least 15 minutes. Get medical attention.

INHALATION: Remove to fresh air. Call a physician if exposure is severe.

INGESTION: If swallowed, drink large quantities of milk, or gelatin solution or, if these are not available, drink large quantities of water. DO NOT give vinegar or other acids. DO NOT induce vomiting. Get prompt medical attention.

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SECTION IV: SPECIAL PROTECTION INFORMATION

VENTILATION REQUIRED: Local exhaust is recommended.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: Use National Institute of Occupational Safety & Health (NIOSH) approved respirator with CHLORINE type canister.

EYES: Use chemical goggles and/or face shield. SKIN: Use rubber gloves.

ADDITIONAL PROTECTIVE MEASURES: Use rubber splash apron. Safety shower and eye wash fountain should be located nearby.

SECTION V: FIRE & EXPLOSION HAZARD DATA

FLASH POINT (Test Method): N/A FLAMMABLE LIMITS IN AIR (Volume %): N/A EXTINGUISHING MEDIA: Flood with water or carbon dioxide (CO2).

SPECIAL FIRE FIGHTING PROCEDURES: Use National Institute of Occupational Safety & Health (NIOSH) approved respirator with acid type canister or use self-contained breathing apparatus. UNUSUAL FIRE AND EXPLOSION HAZARDS: Material is a strong oxidizer. Contact with combustibles may initiate or promote combustion. Acid and heat accelerate decomposition. Decomposition products may include chlorine.

SECTION VI: PHYSICAL DATA

APPEARANCE: Yellow-green liquid

BOILING POINT: 219 Dgr.. F. (104 Dgr. C) for 12.5% NaOC1 by weight FREEZING POINT: - 11 Dgr. F. (-24 Dgr. C) for 12.5% NaOC1 by weight

ODOR: Chlorine

pH: 12.5 - 13.5 s.u. @ 25 Dgr. C

VISCOSITY (CS): 2.15 @ 23 Dgr. C for 12.5% NaOC1 by weight

PERCENT VOLATILE BY VOLUME: Variable water plus products of decomposition.

SOLUBILITY IN WATER: Complete

SPECIFIC GRAVITY (Water=1): 1.224 @ 20 Dgr. C for 14.15% NaOC1 by weight

VAPOR DENSITY (Air=1): Not available

VAPOR PRESSURE (mm Hg): Variable water plus products of decomposition.

SECTION VII: REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Solutions are fairly stable in concentrations below 10%. Stability decreases with concentration, heat, light, exposure, decrease in pH, and contamination with heavy metals, such as nickel, cobalt, copper and iron. INCOMPATIBILITY

Acids, alcohols, amines, ammonia, chlorinated isocyanurates, combustibles, cyanides, detergents, ethers, hydrocarbons, oxidizable materials, reducing agents. Corrosive to most metals.

DECOMPOSITION PRODUCTS

Hypochlorous Acid (HOC1), chlorine, hydrochloric acid. Composition depends upon temperature and decrease in pH. Additional decomposition products, which depend upon pH, temperature and time, are sodium chloride, sodium chlorate, and oxygen.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VIII: SPILL AND LEAK PROCEDURES

Cleanup personnel must wear proper protective equipment (See Section IV). Contain in diked area. Neutralize with sodium bisulfite or ferrous salt solutions. Place neutralized material in DOT specification approved container(s). Flush area with large amounts of water. Comply with all Federal, State and Local reporting requirements.

Before flushing residue and/or product into local sewer system, check pH of acceptable effluent water in accordance with local water treatment plant.

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WASTE DISPOSAL

Contact Federal, State, County and Local environmental regulators for guidance regarding proper disposal.

SECTION IX: D.O.T. SHIPPING INFORMATION

FREIGHT CLASS: 55

PROPER SHIPPING NAME: SEE PAGE ONE.

SECTION X: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING

DANGER: This product is corrosive and may cause severe skin irritation or chemical burns to broken skin. Causes eye damage. DO NOT get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

PROPER STORAGE AND DISPOSAL REQUIREMENTS

Store in a cool, dry area away from direct sunlight. In case of spill, flood area with large quantities of water. Rinse empty container thoroughly with water and either return to manufacturer or discard by placing in trash collection or burying in an approved landfill. Product or rinseate that cannot be used, should be diluted with water and disposed of in a sanitary sewer. Do not contaminate food, or feed by storage, disposal or cleaning of equipment. STORE IN AN UPRIGHT POSITION.

OTHER PRECAUTIONS

STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with gross filth such as feces, urine, etc., or with ammonia, acids, detergents or other chemicals may release hazardous gases irritating to eyes, lungs and mucous membranes.

ADDITIONAL REGULATORY CONCERNS

FIFRA: This product is regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) if used as a disinfectant or sanitizer. TSCA: Included in the Toxic Substances Control Act (TSCA) Inventory of Chemical Substances.

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DATE ISSUED: 07/24/00

PREPARED BY: Regulatory Affairs

This supersedes any and all Material Safety Data Sheet issued prior to the above date. Please update your files with this most current sheet.