MATERIAL SAFETY DATA SHEET

NFPA 704 DESIGNATION

HAZARD RATING

4 = EXTREME

3 = HIGH 2 = MODERATE

1 = SLIGHT

O = INSIGNIFICANT

HEALTH = 3 FIRE = 0 REACTIVITY = 1 0 SPECIAL = COR

PRODUCT NAME: PRODUCT 198 CAUSTIC SODA

CHEMICAL NAME: N/A

CHEMICAL FAMILY: CAUSTIC SOLUTION

FORMULA: PROPRI ETARY

MOLECULAR WEIGHT: N/A

D. O. T. SHIPPING CLASSIFICATION:

COMPOUND, CLEANING LIQUID CORROSIVE MATERIAL NA1760,

----I. PHYSICAL DATA -----

BOILING POINT 760 MM HG:

> 212 DEG. F.

FREEZING POINT:

<-10 DEG. F.

SPECIFIC GRAVITY (WATER=1):

1.52 @ 20 DEG. C.

pH OF 1% (W/V) SOLUTION:

PERCENT VOLATILE ORGANICS BY VOLUME:

N/A

SOLUBILITY IN WATER:

COMPLETE

APPEARANCE AND ODOR:

CLEAR, COLORLESS LIQUID WITH NO CHARACTERISTIC ODOR.

----II. HAZARDOUS INGREDIENTS -----

ACGI H **OSHA** MATERI AL HAZARD % TLV (UNITS) PEL

SODI UM HYDROXI DE;

CAS #1310-73-2 CORROSI VE 35 + / - 5AIR: AIR: CL 2 MG. /CU. M. 2 MG. /CU. M.

POTASSIUM HYDROXIDE;

CAS #1310583 **CORROSI VE** AIR: AIR: CL 15+/-5 2 MG. /CU. M. 2 MG. /CU. M.

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----- FIRE AND EXPLOSION HAZARD DATA -----

FLASH POINT (TEST METHOD(S)): N/A

AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS IN AIR, % BY VOLUME

LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA:

WATER, FOAM, CARBON DIOXIDE AND DRY CHEMICALS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

WATER SOLUTIONS ARE CORROSIVE.

CONTACT WITH SOFT METALS (I.E. ALUMINUM, MAGNESIUM AND ZINC) GENERATES FLAMMABLE/EXPLOSIVE HYDROGEN GAS. ADDITION OF WATER TO PRODUCT 198 CAN RELEASE A

LARGE AMOUNT OF HEAT.

SPECIAL FIRE FIGHTING PROCEDURES:

WHEN FIRE FIGHTING, WEAR FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING EQUIPMENT.

----IV. HEALTH HAZARD DATA -----

THRESHOLD LIMIT VALUE:

NOT ESTABLISHED ON THIS PRODUCT.

ROUTE OF EXPOSURE:

EYE CONTACT: "DANGER" CORROSI VE

SKIN CONTACT: "DANGER" CORROSIVE

SKIN ABSORPTION: NO DATA PUBLISHED

INHALATION: HARMFUL IF INHALED

INGESTION: HARMFUL IF SWALLOWED

EFFECTS OF OVEREXPOSURE:

CAUSES SEVERE EYE AND SKIN IRRITATION OR BURNS. HARMFUL IF SWALLOWED.

EMERGENCY AND FIRST AID PROCEDURES:

EVES.

IMMEDIATELY FLUSH EYES WITH PLENTY OF CLEAN RUNNING WATER FOR AT LEAST 15 MINUTES, LIFTING THE UPPER AND LOWER LIDS OCCASIONALLY. CALL A PHYSICIAN IMMEDIATELY.

EXTERNAL:

IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF CLEAN RUNNING WATER FOR AT LEAST 15 MINUTES, WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. IF BURN

OR IRRITATION OCCURS, CALL A PHYSICIAN.

INTERNAL:

IF SWALLOWED, DO NOT INDUCE VOMITING. IMMEDIATELY DRINK A LARGE QUANTITY OF MILK

OR WATER AND CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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CHRONIC EXPOSURE EFFECTS: REPEATED EXPOSURE CAN CAUSE ULCERATION AND DESTRUCTION OF TISSUE; OTHERWISE, SAME AS FOR OVEREXPOSURE.
V. REACTIVITY DATA
STABILITY: UNSTABLE: () STABLE: (X)
CONDITIONS TO AVOID: NONE.
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG ACIDS, CHLORINATED HYDROCARBONS, ZINC, ALUMINUM, MAGNESIUM AND TIN.
HAZARDOUS DECOMPOSITION PRODUCTS: WHEN HEATED TO DECOMPOSITION, IT CAN EMIT TOXIC OXIDES OF SODIUM AND POTASSIUM.
HAZARDOUS POLYMERIZATION: MAY OCCUR: () WILL NOT OCCUR: (X)
CONDITIONS TO AVOID: NONE
VI. SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: CONTAIN SPILL. (FOR SMALL SPILLS, ADD DRY MATERIAL TO CONTAIN). WEARING RECOMMENDED PROTECTIVE EQUIPMENT, PICK UP BULK OF LIQUID. FLUSH AREA WITH PLENTY
OF WATER; COLLECT RINSATES FOR DISPOSAL OR SEWER AS APPROPRIATE.
WASTE DISPOSAL METHOD: THIS PRODUCT, IF DISPOSED AS SHIPPED, MEETS EPA CRITERIA OF A HAZARDOUS WASTE AS
SPECIFIED IN 40 CFR 261 ON THE BASIS OF ITS CORROSIVITY. DISPOSE OF PRODUCT IN
LICENSED HAZARDOUS WASTE DISPOSAL FACILITY IN ACCORDANCE WITH ALL APPLICABLE LAWS.
WHEN EMPTY, THOROUGHLY RINSE CONTAINER WITH WATER BEFORE DISPOSAL, RETURN TO MANUFACTURER OR ANY OTHER INDUSTRIAL USE.
VII. SPECIAL PROTECTION INFORMATION
RESPIRATORY PROTECTION (SPECIFY TYPE): NOT REQUIRED WHEN USED AS DIRECTED.
VENTI LATI ON LOCAL EXHAUST: PREFERABLE
SPECIAL: NONE
MECHANI CAL (GENERAL): OK
OTHER: N/A
PROTECTI VE GLOVES:

RUBBER

EYE PROTECTION: CHEMICAL GOGGLES

OTHER PROTECTIVE EQUIPMENT: RUBBER APRON AND RUBBER BOOTS

-----VIII. SPECIAL PRECAUTIONS -----

PRECAUTIONARY LABELING:

FOR INDUSTRIAL USE ONLY. DO NOT GET PRODUCT IN EYES, ON SKIN, OR ON CLOTHING. USE ONLY WITH ADEQUATE VENTILATION. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. WASH THOROUGHLY AFTER HANDLING.

DEADLY CARBON MONOXIDE GAS CAN FORM WHEN PRODUCT 198 CONTACTS FOOD SOIL CONTAINING SUGARS. AFTER CLEANING OPERATIONS ARE COMPLETED, THOROUGHLY VENTILATE ENCLOSED AREAS BEFORE ENTERING. ALWAYS MONITOR OXYGEN AND CARBON MONOXIDE LEVELS WHEN PERSONNEL ARE IN ENCLOSED AREAS. FOR PROPER TANK ENTRY PROCEDURES, SEE ANSI Z-117.1-1977.

THIS PRODUCT IS NOT FORMULATED TO CONTAIN A KNOWN CARCINOGEN OR REPRODUCTIVE TOXIN.

OTHER HANDLING AND STORAGE CONDITIONS: WHEN MAKING SOLUTIONS, ALWAYS ADD PRODUCT 198 TO WATER WITH ADEQUATE MIXING.

PREPARED BY: EDWARD DOHENY

DATE: 01/17/90

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