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MI-CLEAN 310

1 IDENTIFICATION

Product Code :2052016

Recommended use of the chemical and restrictions on use:Alkaline Liquid Cleaner

Hubbard-Hall Inc.

563 South Leonard Street

Waterbury, CT 06708

Telephone: 203-756-5521

Fax number: 203-756-9017

Emergency Phone Number

CHEMTREC: 1 (800) 424-9300

International: 1 (703) 527-3887

2 HAZARDS IDENTIFICATION



Signal Word: DANGER

Hazard Category: Corrosive to Metals Hazard Category 1

Acute Toxicity-Oral Hazard Category 4

Skin Corrosion/Irritation Hazard Category 1A

Eye Damage/Irritation Hazard Category 1

Specific Target Organ Toxicity (Single Exposure) Hazard Category 3

Hazard Statements: May be corrosive to metals.

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause respiratory irritation.

Prevention: Keep only in original container.

Wear protective gloves, chemical protective clothing, eye protective goggles and face shield for face prot

Do not eat, drink or smoke when using this product.

Avoid breathing dust, fumes, gas, mist, vapors and sprays.

Wash skin thoroughly after handling.

Use only outdoors or in well ventilated area.

Response: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call poison center/doctor if yo

If swallowed: Rinse mouth. Do NOT induce vomiting.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

If on skin (or hair): Take off immediately all contaminated clothing Rinse skin with water/shower .

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If swallowed: Call poison center, if you feel unwell.

Immediately call poison center or doctor and explain the type of exposure to the chemical(s) and provide information. Specific treatment - refer to poison center or doctor for advice.

Storage: Store locked up.

Store in corrosive resistant high density polyethylene container.

Store in a well ventilated place. Keep cool .

Disposal: Dispose of contents/container in accordance with local, regional, national, or international regulations.

3 COMPOSITION INFORMATION

Chemical Name	Common Name And Synonyms	CAS No. and other Unique identifiers	Concentration %
Sodium Hydroxide	Caustic Soda	1310-73-2	<3%
Sodium Metasilicate	Disodium Metasilicate	6834-92-0	<10%
Dipropylene Glycol Monmethyl ether	DPM Glycol Ether	34590-94-8	<5%

4 FIRST AID

After Inhalation:

Move to fresh air. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one way valve or other proper respiratory device. Call a physician or poison control center immediately.

After Skin Contact:

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean all contaminated shoes.

After Eye Contact:

Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Call a physician or poison control center immediately.

After Ingestion:

Call a physician or poison control center immediately. Do not induce vomiting. Immediately rinse mouth and drink plenty of water. If vomiting occurs, keep head low so that the stomach content doesn't get into the lungs. Never give anything by mouth to an unconscious person. Do not use mouth-to-mouth method if victim ingested the substance.

Most Important Symptoms/Effects

Delayed:

Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Shortness of breath.

Indication of immediate medical attention:

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Keep victim under observation.

Special Precautions / Procedures:

Emergency personnel should protect against secondary contamination.

5 FIRE FIGHTING MEASURES

Suitable and Unsuitable extinguishing media:

Water fog. Foam. Dry Chemical powder. Carbon Dioxide (CO₂). Use extinguishing agent suitable for type of surrounding fire. Do not use solid water stream as it may scatter and spread fire. Do not use halogenated extinguishing agents.

Specific hazards arising from the chemical:

The product itself does not burn. May decompose upon heating to produce corrosive and/or toxic fumes. Contact with metal may release flammable hydrogen gas.

Special protective equipment and precautions for firefighter

Fire fighters should enter area only if they are protected from all contact with the material. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms, and waist, should be worn. No skin surfaces should be exposed.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, & Emergency Proc

Prevent spilled product from drains, sewers, waterways and soil.

Wear appropriate chemical protection equipment such as gloves, face-shield, goggles and suitable body protection to prevent contamination of skin, eyes and personal clothing.

Methods and Materials for containment & cleaning up:

If trained in accordance 29 CFR 1910.120, leaks should be stopped. Spills should be contained and cleaned immediately. Persons performing clean up work should wear adequate personal protective equipment and clothing. Spills and releases should be reported, if required, to the appropriate local, state and federal regulatory agencies.

7 HANDLING AND STORAGE

Precautions for safe handling:

Use caution when combining with water. DO NOT add water to Caustic. ALWAYS add caustic to water while stirring to minimize heat generation. Do not get in eyes, skin or on clothing. Do not taste or swallow. Do not breath vapor or mist. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible and corrosion resistant. Observe good industrial hygiene practices.

Conditions for safe storage, inc any incompatibilities:

Keep container tightly closed.

Store in cool dry place.

Store away from incompatible materials. (See section 10).

Do not allow material to freeze.

Store in corrosive resistant container.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	Std.	TWA-8hrs	STEL - 15 min.
Sodium Hydroxide	ACGIH	2 mg/m3	
Sodium Metasilicate	not established	-	-
Dipropylene Glycol MonomethylEther	ACGIH	100 ppm	-

ACGIH - American Control of Governmental Hygenists
OSHA - Occupational Safety and Health Administration

Ventilation:

Use local exhaust to keep personal exposures below the OSHA Permissible Exposure Limit (s) (PEL) or the ACGIH threshold Limit Values (TLV)Time Weight Average (TWA).

Respiratory Protection:

A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI 788.2 or applicable federal requirements must be followed whenever work place conditions warrant respirator use. NIOSH's Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Not required if proper ventilation controls are employed.

Other:

It is recommended that a hazard assesment in accordance with the OSHA PPE standard (29 CFR 1910.132) be conducted before using this product.

Protective Gloves:

Rubber gloves

Eye Protection:	Wear chemical safety goggles with face shield.
Other Protective Equipment:	Wear chemical resistant apron.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow Liquid
Odor:	No odor
Odor Threshold:	N/A
PH:	12-13
Melting Point/Freezing Point:	N/A
Initial Boiling Point and Boiling Range:	N/A
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability (solid, gas):	N/A
Upper/Lower flammability or explosive limits:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Relative Density:	1.01-1.02
Solubility (ies):	Complete in water
Partition Coefficient; n-octanol/water:	N/A
Auto-ignition Temperature:	N/A
Decomposition Temperature:	N/A
Viscosity:	N/A

10 STABILITY AND REACTIVITY

Reactivity:	Contact with metal may release flammable hydrogen gas.
Chemical Stability:	Stable under normal conditions
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Corrosive to aluminum, tin, zinc, copper and most alloys in which they are present including brass and bronze. Corrosive to steels at elevated temperatures above 40 °C.
Incompatible Materials:	Avoid contact with aluminum, tin, zinc, halogenated solvents, and strong oxidizers and acids.
Hazardous Decomposition Products:	Contact with metal (aluminum, zinc, tin) and sodium tetrahydroborate liberates hydrogen gas.

11 TOXICOLOGICAL INFORMATION

Oral Administration:	Caustic 50% solution: LD50, Rat-300-500 mg/kg
Oral Administration:	Sodium Metasilicate-(Rat-male and female) LD50-1152-1349 mg/kg
Oral Administration:	Dipropylene Glycol Monmethyl Ether-LD50(Rat)->5000 mg/kg
Dermal administration:	Caustic 50% solution-LD50 Rabbit->2 g/kg
Dermal administration:	Dipropylene Glycol Monmethyl Ether-LD50-Rabbit-9510 mg/kg
Immediate effects:	Severe irritation or burns to skin, eyes and respiratory system
Cancer Hazard:	Not listed by IARC, NTP, OSHA, ACGIH

12 ECOLOGICAL INFORMATION

Fish, *Lepomis macrochirus*, Caustic-99 mg/L, 48 hrs
Bioaccumulation potential: Unlikely
Water result: Disperses in water.
Soil/Sediment Result: Pronounced solubility and mobility

13 DISPOSAL CONSIDERATION

Dispose of in accordance with local, state and federal regulations.

14 TRANSPORT INFORMATION

UN Number: 3266
UN Proper Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(SODIUM HYDROXIDE, SODIUM METASILICATE),
Transport Hazard Class (es): 8
Packing Group: III
ERG: 154

15 REGULATORY INFORMATION

HMIS: Health: 1 Flammability: 0 Reactivity: 0

Cercla 2000 lb RQ (Caustic 50%)

Sara Hazard Classification SARA 302 - Extremely Hazardous Substances; None present

Sara Hazard Classification SARA Hazard Categories: Immediate Hazard:Yes Delayed Hazard:Yes Fire Hazard-No Pressure Hazard-No Reactivity Hazard-yes

16 OTHER INFORMATION

No **RoHS** or **REACH SVHC** are contained in this product.

Disclaimer: The information is based on our knowledge to date but does not constitute an assurance of product properties and does not imply a legal contractual relationship.

Date Prepared: 9/16/14