



Material Safety Data Sheet

1. IDENTIFICATION

PRODUCT NAME: H2-CS-MP

CHEMICAL NAME/SYNONYMS: caustic, caustic soda - solid, caustic soda – beads, caustic soda - #2 Flake, caustic soda - #4 Flake, caustic soda – rayon, caustic soda – diaphragm, diaphragm compounder

CHEMICAL FAMILY:

CHEMICAL FORMULA:

For emergencies call Chemtrec at 1-800-424-9300

2. HAZARD(S) IDENTIFICATION

MAJOR HEALTH HAZARDS: may cause burns to the respiratory tract, skin, eyes and gastrointestinal tract. May cause permanent eye damage

POTENTIAL HEALTH EFFECTS:

EYES: Short term exposure: irritation, burns, eye damage, blindness

Long term exposure: visual disturbances

SKIN: Short term exposure: irritation, burns

Long term exposure: dermatitis

INGESTION: Short term exposure: irritation, burns, nausea, vomiting

Long term exposure: to our knowledge, no effects are known

INHALATION: Short term exposure: irritation (possibly severe), burns, pulmonary edema

Long term exposure: to our knowledge, no effects are known

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS #</u>	<u>COMPONENT</u>	<u>PERCENT</u>
1310-73-2	sodium hydroxide	97-98.2
7647-14-5	Sodium chloride	0-1.2
497-19-8	Sodium carbonate	0.4-1

4. FIRST-AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 30 minutes while holding eyelids open. Speed in beginning the eye wash is essential if permanent injury is to be avoided. you may have ten seconds or less to avoid serious permanent injury. Get medical attention.

SKIN: Immediately remove contaminated clothing or shoes, wipe excess from skin and flush with plenty of water for at least 30 minutes. Do not reuse clothing until thoroughly cleaned. Get medical attention.

INGESTION: Do not induce vomiting. Rinse mouth with water. If conscious, give large quantities of water or milk and get immediate medical attention. Never give anything by mouth to an unconscious person.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Keep the victim warm and at rest. Get medical attention.

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NOTE TO PHYSICIAN: the absence of visible signs or symptoms of burns does not reliably exclude the presence of actual tissue damage. In the group that the sixth and San

5. FIRE-FIGHTING MEASURES**GENERAL FIRE HAZARDS:****UPPER FLAMMABLE LIMIT (UFL):** N/A**LOWER FLAMMABLE LIMIT (LFL):** N/A**METHOD USED:** N/A**FLASH POINT:** nonflammable**FLAMMABILITY CLASSIFICATION:** N/A**AUTO IGNITION:** N/A**SENSITIVITY TO MECHANICAL IMPACT:** not sensitive**SENSITIVITY TO STATIC DISCHARGE:** not sensitive**EXTINGUISHING MEDIA:** Use media appropriate for surrounding area. Do not use water.**FIRE FIGHTING EQUIPMENT/INSTRUCTIONS:** move container from fire area if it can be done without risk.**UNUSUAL FIRE AND EXPLOSION HAZARDS:** negligible fire hazard**NFPA CODES: HEALTH: 3 FIRE: 0 REACTIVITY: 2**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

ACTIONS TO TAKE FOR SPILLS OR LEAKS: shovel dry material into suitable container. Keep out of water supplies and sewers. This material is alkaline and may raise the pH of 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 or equal to RQ (U.S. SARA Section 304). If released occurs in the U.S. and as reportable under CERCLA section 103, notified the National Response Center at 800-424-8802.

7. HANDLING AND STORAGE

STORAGE: store and handle in accordance with all current regulations and standards. Keep container 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.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**EXPOSURE GUIDELINES:**

Component	Exposure Limits, MG/M3			
	OSHA TWA	ACGIH Ceiling	OSHA Ceiling	MEXICO peak
Sodium hydroxide	2	2	2	2

PERSONAL PROTECTION:

VENTILATION: Local exhaust ventilation is recommended if vapors, mists or aerosols are generated. Otherwise, use general exhaust ventilation.

EYES AND FACE: Wear chemical goggles and full face-shield unless a full face-piece respirator is also worn. Do not wear contacts.

CLOTHING: Wear rubber boots, gloves and apron.

RESPIRATORY: respiratory protection is not required under normal use. Use NIOSH/MSHA approved respirators where dust, mist, or spray maybe generated.

GENERAL: An eyewash and safety shower should be nearby and ready for use.

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GLOVES: wear suitable gloves. Discard contaminated leather goods. When wet mixing, wear chemical resisting gloves such as butyl rubber, natural rubber, neoprene or nitrile.

RESPIRATOR: a NIOSH approved respirator with N95 filters may be permissible under certain circumstances where Airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure.

A half face-piece air-purifying respirator may be used in concentrations of to 1 X the acceptable exposure level and a full face-piece air-purifying respirator may be used in concentrations of to 50 X the acceptable exposure level.

Supplied air should be used when the level is expected to be above 50 X. the acceptable level, or when there is a potential for uncontrolled release.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

MOLECULAR WEIGHT: 40

SPECIFIC GRAVITY: 2.13 at 20°C

FREEZE POINT IN °F:

BOILING POINT IN °F: not applicable

MELTING POINT: 604°F

DENSITY: LB/GAL

PH: not applicable

VAPOR PRESSURE @ 140°F (MMHG): not applicable

VAPOR DENSITY: not applicable

EVAPORATION RATE:

WATER SOLUBILITY: 100%

COLOR: white

ODOR: odorless

APPEARANCE:

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Hazardous Polymerization will not occur

REACTIVITY: stable at normal temperatures and pressure

CONDITIONS TO AVOID: avoid direct contact with water. Direct contact with water may cause an exothermic reaction. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

HAZARDOUS DECOMPOSITION: not known

INCOMPATIBILITIES: acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkalis sensitive metals our alloys

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Sodium Hydroxide: 1350 mg/kg Dermal-Rabbit LD50, 220mg/kg (50% solution) Oral-Rat LD50. As a solid, this material interacts with moist tissue to cause damage.

When in solution, this material will affect all tissues with which it comes in contact. 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. 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 and reaction or obstructive airway dysfunction.

CARCINOGENICITY: not listed in NTP – 1983, IARC or OSHA

12. ECOLOGICAL INFORMATION**ECOTOXICITY DATA:****FISH TOXICITY:** this material has exhibited moderate toxicity to aquatic organisms**FATE AND TRANSPORT:****BIODEGRADATION:** this material is inorganic and not subject to biodegradation**PERSISTENCE:** this material will exist in the disassociated state**BIOCONCENTRATION:** this material is believed not to bioaccumulate**OTHER ECOLOGICAL INFORMATION:** this material has exhibited slight toxicity to terrestrial organisms**13. DISPOSAL CONSIDERATIONS****DISPOSAL METHODS:** Reuse or reprocess if possible. Dispose in accordance with all applicable regulations.**14. TRANSPORT INFORMATION****This material is regulated as a DOT Hazardous Material.****US DOT INFORMATION:**

UN/NA #	Shipping Name Hazard	Class	Packing Group	ERG	RQ
UN1823,	Sodium Hydroxide,solid,	8,	II,	154	1000lbs

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 Hazardous Substances:

SODIUM HYDROXIDE: 1000 LBS RG

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: Yes

SUDDEN RELEASE: No

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

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

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:

SODIUM HYDROXIDE 1310-73-2 9]-98.2%

SODIUM CHLORIDE 7647-14-5 0-1.2%

SODIUM CARBONATE 497-19-8 0.4-1.01

RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:

SODIUM HYDROXIDE 1310-73-2 97-98.2%

SPECIAL HEALTH HAZARD SUBSTANCE LIST:

SODIUM HYDROXIDE 1310-73-2 97-98.2%

MSDS

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PENNSYLVANIA RIGHT TO KNOW: REPORTING REQUIREMENT:
SODIUM HYDROXIDE 1310-73-2 97-9B.2X

HAZARDOUS SUBSTANCE LIST:
SODIUM HYDROXIDE 1310-73-2 97-98.21.

ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:
SODIUM HYDROXIDE 1310-73-2 97-98.27.

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: D 1 B, 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.

16. OTHER INFORMATION

Do not use ingredient information and/ or ingredient percentages in this MSDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from H2O Technical Services.

DISCLAIMER:

We believe that the information in this MSDS is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily either all-inclusive or fully adequate in every circumstance. Also, these suggestions should not be confused with or followed in violation of applicable laws, regulations, rules or insurance requirements.

NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.