

Material Safety Data Sheet

Sodium Hydroxide 10.00N



Section 1. Product and Company Identification

Product name : Sodium Hydroxide 10.00N
Product code : SX0607N
Synonym : Caustic Solution
Material uses : Other non-specified industry: Laboratory Reagent
Manufacturer : EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday - Friday: 8:00 - 5:00 PM
Validation date : 10/15/2007.
Print date : 10/15/2007.
In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Section 2. Hazards Identification

Physical state : Liquid.
Odor : Odorless.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : DANGER!
POISON!
MAY BE FATAL IF SWALLOWED.
CAUSES EYE AND SKIN BURNS.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF INHALED.
Do not ingest. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist.
Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects
Eyes : Corrosive to eyes.
Skin : Harmful in contact with skin. Corrosive to the skin.
Inhalation : Moderately irritating to the respiratory system.
Ingestion : Very toxic if swallowed. May cause burns to mouth, throat and stomach.
Carcinogenic effects : No known significant effects or critical hazards.
Mutagenic effects : No known significant effects or critical hazards.
Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.
Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

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Section 3. Composition/Information on Ingredients

United States

<u>Name</u>	<u>CAS number</u>	<u>% by Weight</u>
Sodium Hydroxide	1310-73-2	40
Water	7732-18-5	60

Section 4. First Aid Measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
- Skin contact** : Get medical attention immediately. Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing or wear gloves.

Section 5. Fire Fighting Measures

Flammability of the product : No specific hazard.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Not available.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special remarks on fire hazards** : Development of hazardous combustion gases or vapors possible in the event of fire.
- Special remarks on explosion hazards** : Contact with many metals produces highly flammable hydrogen gas.

Section 6. Accidental Release Measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and Storage

- Handling** : Do not ingest. Do not get in eyes or on skin or clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Product name

Exposure limits

United States

Sodium Hydroxide

ACGIH (United States).

CEIL: 2 mg/m³

OSHA (United States).

CEIL: 2 mg/m³

NIOSH REL (United States, 1994).

CEIL: 2 mg/m³

OSHA Final Rule (United States, 1989).

CEIL: 2 mg/m³

Consult local authorities for acceptable exposure limits.

- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: face shield
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body: Recommended: safety apron and gloves
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Vapor respirator or self-contained breathing apparatus (SCBA).
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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Section 9. Physical and Chemical Properties

Physical state	: Liquid.
Color	: Clear. Colorless.
Odor	: Odorless.
Boiling/condensation point	: The lowest known value is 99.9°C (211.8°F) (Water).
Melting/freezing point	: May start to solidify at -0.1°C (31.8°F) based on data for: Water.
Relative density	: The only known value is 2.13 (Water = 1) (Sodium Hydroxide).
Evaporation rate	: 0.36 (Water) compared with (n-Butyl Acetate =1)

Section 10. Stability and Reactivity

Stability and reactivity	: The product is stable.
Incompatibility with various substances	: Highly reactive or incompatible with the following materials: metals and acids. Reactive or incompatible with the following materials: organic materials and moisture. Can react with certain metals to release explosive hydrogen gas.
Hazardous decomposition products	: Na ₂ O
Hazardous polymerization	: Will not occur.
Conditions of reactivity	: Explosive in the presence of the following materials or conditions: metals. Contact with many metals produces highly flammable hydrogen gas.

Section 11. Toxicological Information

Toxicity data

United States

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Sodium Hydroxide	LDLo	500 mg/kg	Oral	Rabbit

Chronic effects on humans : Contains material which causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.

Other toxic effects on humans : Extremely hazardous in case of ingestion.
Very hazardous in case of skin contact (corrosive), of eye contact (corrosive).
Hazardous in case of inhalation (lung irritant).
Slightly hazardous in case of inhalation (lung sensitizer, lung corrosive).

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Sensitization

Ingestion	: May cause burns to mouth, throat and stomach.
Inhalation	: Moderately irritating to the respiratory system.
Eyes	: Corrosive to eyes.
Skin	: Corrosive to the skin.

Section 12. Ecological Information

Environmental precautions	: No known significant effects or critical hazards.
Products of degradation	: Some metallic oxides.
Toxicity of the products of biodegradation	: The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations


- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- RCRA classification** : Code: (C)

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	UN1824	Sodium Hydroxide Solution	8	-		Not available.

Packing group

Section 15. Regulatory Information

United States

- HCS Classification** : Highly toxic material
Corrosive material
Target organ effects
- U.S. Federal regulations** : TSCA 8(b) inventory: Listed
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Sodium Hydroxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Hydroxide: Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Sodium Hydroxide
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
- State regulations** : Pennsylvania RTK: Sodium Hydroxide: (environmental hazard, generic environmental hazard)
Massachusetts RTK: Sodium Hydroxide
New Jersey: Sodium Hydroxide 10.00N

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Section 15. Regulatory Information

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class E: Corrosive material

CEPA DSL/CEPA NDSL : CEPA DSL: Sodium Hydroxide; Water

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations

Risk phrases : This product is not classified according to EU legislation.

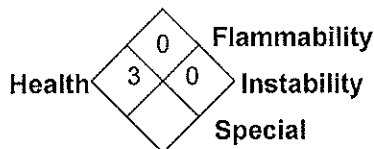
International regulations

International lists : Australia (NICNAS): Sodium Hydroxide; Water
Japan (METI): Sodium Hydroxide; Water
Korea (TCCL): Sodium Hydroxide; Water
Philippines (RA6969): Sodium Hydroxide; Water

Section 16. Other Information

Label requirements : DANGER!
POISON!
MAY BE FATAL IF SWALLOWED.
CAUSES EYE AND SKIN BURNS.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF INHALED.

National Fire Protection
Association (U.S.A.) :



Notice to reader

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