Material Safety Data Sheet

LYE Sodium Hydroxide Liquid (RXSOL-19-1308-210)

1. Product and Company Identifaction

Product Name	**RXSOL-19-1308-210**
Product Type	**Caustic Liquid**

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Stock Point : Mumbai, Kolkata, Chennai, Kandla, Visakhapatnam, Fujairah

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Email	mail@rxmarine.com

2. Composition / informationon ingredients

Chemical Name	Percent	Value	Test Method
Sodium hydroxide(NaOH),min.	%	48-50	STAS3068
Sodium carbonate (Na2CO3), max	%	0.7	STAS3068
Water	%	50-52	

3. Hazards Identification

Poison! Danger! Corrosive. May Be Fatal If Swallowed. Harmful If Inhaled. Causes Burns To Any Area Of Contact . Reacts With Water, Acids And Other Materials.

Potential Health Effects:-

Inhalation	Severe irritant. Effects from inhalation of dust or mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.
Ingestion	Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach .Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting diarrhea, fall in blood pressure. Damage may appears days after exposure.
Skin Contact	Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.
Eye Contact	Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure	Prolonged contact with dilute solutions or dust has a destructive effect upon tissue. Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

4. First Aid Measures

Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion	Do Not Induce Vomiting! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately. May cause damage to cardiovascular, respiratory, nervous, and gastrointestinal systems and liver and blood through prolonged or repeated exposure. Harmful to aquatic life.
Skin Contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire-fighting Measures

Fire	Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.
Explosion	Not considered to be an explosion hazard.
Fire Extinguishing Media	Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal.

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

8. Exposure controls and personal protection

Airborne Exposure Limits	OSHA
OSHA Permissible Exposure Limit (PEL)	2 mg/m3 Ceiling – ACGIH

Threshold Limit Value (TLV)	2 mg/m3 Ceiling
Ventilation System	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recomm-ended Practices, most recent edition, for details.
Personal Respirators	If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.
WARNING	Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection	Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and chemical properties

Appearance	Clear to opeque
Odor	Odorless
Solubility	100%
pH	13 - 14 (0.5% soln.)
Specific Gravity	1.2 – 1.53
% Volatiles by volume @ 21C (70F)	0
Boiling Point	1390C(2534F)
Melting Point	318C(604 F)
Vapor Pressure (mm Hg)	Negligible
Evoporation Rate (BuAc = 1)	No information found

10. Stability and reactivity

Stability	Stable under ordinary conditions of use and storage. Very hygroscopic. Can slowly pick up moisture from air and react with carbon dioxide from air to form sodium carbonate.

Hazardous Decomposition Products	Sodium Hydroxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.Hazardous
Hazardous Polymerization	Will not occur.
Incompatibilities	Contact with water, acids, flammable liquids, and organic halogen compounds, especially trichloroethylene, may cause fire or explosion. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, tin, and zinc causes formation of flammable hydrogen gas.
Conditions to Avoid	Moisture, dusting and incompatibles.

11. Toxicological information

Skin Irritation	Irritant wash with soap water
Eye Irritat	EXTREMELY CORROSIVE Fatal if inhaled. Avoid to be swallowed. Causes severe skin burns and eye damage. Can cause blindness, permanent scarring and death. Toxic if swallowed and in contact with skin Suspected of damaging the unborn child.
Sensitization	Not Sensitizing .

IRRITATION DATA:

1 percent/24 hour(s) eyes-monkey severe; 500 mg/24 hour(s) skin-rabbit severe; 400 ug eyes-rabbit mild; 1 percent eyes-rabbit severe; 50 ug/24hour(s) eyes-rabbit severe; 1 mg/24 hour(s) eyes-rabbit severe; 1 mg/30second(s) rinsed eyes-rabbit severe
TOXICITY DATA:

1350 mg/kg skin-rabbit LD50; 104-340 mg/kg oral-rat LD50; 40 mg/kg intra peritoneal-mouse LD50; 500 mg/kg oral-rabbit LDLo
LOCAL EFFECTS:
Corrosive: inhalation, skin, eye, ingestion

ACUTE TOXICITY LEVEL:

Toxic: ingestion
Moderately Toxic: dermal absorption
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
eye disorders, skin disorders andallergies
MUTAGENIC DATA:
cytogenetic analysis - grasshopper parenteral 20 mg; cytogenetic analysis hamster lung 10 mmol/L; cytogenetic analysis - hamster ovary 16 mmol/L

12. Ecological information

Comment	Not applicable
Ecotoxicity	Not applicable , Readily biodegradable
Water hazard class 2 (self-assessment)	Hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system. Danger to drinking water if even small quantities leak into soil.

ECOTOXICITY:
FISH TOXICITY: 240 ug/L 96 hour(s) LC50 (Mortality) Bluegill (Lepomismacrochirus) INVERTEBRATE TOXICITY: 330000-1000000 ug/L 48 hour(s) LC50 (Mortality) Cockle (Cerastoderma edule)
ALGAL TOXICITY: 765 ug/L 30 day(s) (Biomass) Algae,phytoplankton,algal mat (Algae) PHYTOTOXICITY: 230 ug/L 21 week(s) (Biomass) Waterweed (Elodea canadensis)

FATE AND TRANSPORT: BIOCONCENTRATION:

1066 ug/L 32 hour(s) BCF (Residue) Fathead minnow (Pimephales promelas) 3.1 ug/L ENVIRONMENTAL SUMMARY: Highly toxic to aquatic life.

13. Disposal considerations

This material must be disposed with local national regulations. Product Recommendation (Recommended cleaning agent: water) Can be burnt under adherence to the necessary technical regulations. Disposal must be made according to official regulations.Can be reused or recycled after cleaning .

Review federal, state and local government requirements prior to disposal. Do not dispose of waste with normal garbage, or to sewer systems. Whatever cannot be saved for recovery or recycling, including containers, should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

14. Transport information

ROAD TRANSPORT (ADR)		
	ADR class	8
RAIL TRANSPORT (RID)		
	RID class no.	8
SEA TRANSPORT (IMDG)		
	IMDG class	8
AIR TRANSPORT (IATA/ICAO)		
	IATA/ICAO class	8

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Sodium hydroxide, solution ID NUMBER: UN1824
HAZARD CLASS OR DIVISION: 8
PACKING GROUP: II

TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR/RID:
PROPER SHIPPING NAME: Sodium hydroxide, solution UN NUMBER: UN1824
ADR/RID CLASS: 8
CLASSIFICATION CODE: C6
PACKING GROUP: II

AIR TRANSPORT IATA/ICAO:
PROPER SHIPPING NAME: Sodium hydroxide, solution IATA/ICAO CLASS: 8
PACKING GROUP: II

MARITIME TRANSPORT IMDG:
PROPER SHIPPING NAME: Sodium hydroxide, solution

UN NUMBER: UN1824 IMDG CLASS: 8 PACKING GROUP: II

15. Regulatory information

• Irritating to eyes and skin.
• Safety phrases
2 Keep out reach of children

If swallowed, seek medical attention immediately
22 Harmful if swallowed
26 In case of contact with eyes, rinse immediately with plenty of water and
seek medical attention.
23 Do not Breathe
27 After contact with skin, wash immediately with plenty of water and soap and rinse thoroughly.
41 Risk of serious damage to eyes
• National regulations

16. Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.Department issuing data specification sheet Environment protection department.Note : No Enviromental Problems Are Expected If The Product Is Handled Correctly.

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