Material Safety Data Sheet

Calcium Test Kit (RXSOL-62-5536-001)

1. Product and Company Identifaction

Product Name	Calcium Test Kit
Product Type	RXSOL-62-5536-001

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

Phone	+91 22 65113333/ 5555 / 9999 / 27611360 / 27815540
Fax	+91 22 2781 1318 :::AOH :0091 9322594669
Email	mail@rxmarine.com

2. Composition / informationon ingredients

Substances:
See section below for composition of Mixtures :

CAS No	%[weight]	Name
1310-73-2	10	sodium hydroxide

3. Hazards Identification

	Min	Max
Flammability	0	
Toxicity	2	
Body Contact	4	
Reactivity	0	
Chronic	2	

GHS Classification[1]	Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1A, Serious Eye Damage Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

GHS label elements:

SIGNAL WORD DANGER:

Hazard statement(s):

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Precautionary statement(s): Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P234	Keep only in original container.

Precautionary statement(s): Response:

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician/first aider
P321	Specific treatment (see advice on this label).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P304+p340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement(s):
Storage

P405	Store locked up.

Precautionary statement(s):
Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

4. First Aid Measures

Eye Contact	If this product comes in contact with the eyes:Immediately hold eyelids apart and flush the eye continuously with running water.Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay.Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs:Immediately flush body and clothes with large amounts of water, using safety shower if available.Quickly remove all contaminated clothing, including footwear.Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.Transport to hospital, or doctor.
Inhalation	If fumes or combustion products are inhaled remove from contaminated area.Lay patient down. Keep warm and rested.Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained.Perform CPR if necessary.Transport to hospital, or doctor, without delay.
Ingestion	For advice, contact a Poisons Information Centre or a doctor at once.Urgent hospital treatment is likely to be needed.If swallowed do NOT induce vomiting.If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.Observe the patient carefully.Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed:
For acute or short-term repeated exposures to highly alkaline materials:

Respiratory stress is uncommon but present occasionally because of soft tissue edema.Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
Oxygen is given as indicated.
The presence of shock suggests perforation and mandates an intravenous line and fluid administration.Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.
Alkalis continue to cause damage after exposure.

INGESTION:
Milk and water are the preferred diluents
No more than 2 glasses of water should be given to an adult.

Neutralising agents should never be given since exothermic heat reaction may compound injury.
* Catharsis and emesis are absolutely contra-indicated.
* Activated charcoal does not absorb alkali.
* Gastric lavage should not be used.

Supportive care involves the following:
Withhold oral feedings initially.
If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:
Injury should be irrigated for 20-30 minutes.
Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

5. Fire-fighting Measures

Extinguishing media:
Water spray or fog.
Foam.
Dry chemical powder.
BCF (where regulations permit).

Special hazards arising from the substrate or mixture:
Fire Incompatibility:
None known.

Advice for firefighters:
Fire Fighting:
Alert Fire Brigade and tell them location and nature of hazard.
Wear full body protective clothing with breathing apparatus.
Prevent, by any means available, spillage from entering drains or water course.
Use fire fighting procedures suitable for surrounding area.

Fire/Explosion Hazardea.:
Non combustible.
Not considered a significant fire risk, however containers may burn.
Decomposition may produce toxic fumes of:

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Minor Spills	Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.Contain and absorb spill with sand, earth, inert material or vermiculite.
Major Spills	Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Personal Protective Equipment advice is contained in Section 8 of the MSDS.

7. Handling and Storage

Precautions for safe handling:

Safe handling	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. WARNING:
Other information	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities:

Suitable container	Lined metal can, lined metal pail/ can. Plastic pail. Polyliner drum. Packing as recommended by manufacturer.
Storage incompatibility	Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

PACKAGE MATERIAL INCOMPATIBILITIES:

8. Exposure controls and personal protection

Control parameters
OCCUPATIONAL EXPOSURE LIMITS (OEL)
INGREDIENT DATA:

Source	Ingredient	Material name	TWA	STEL	Peak	Peak	Notes
US ACGIH Threshold Limit Values (TLV)	sodium hydroxide	sodium hydroxide	Not Available	Not Available	2 (mg/m3)	2 (mg/m3)	TLV® Basis: URT, eye, & skin irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	sodium hydroxide	sodium hydroxide	2 (mg/m3)	Not Available	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	sodium hydroxide	Caustic soda, Lye, Soda lye, Sodium hydrate	Not Available	Not Available	2 (mg/m3)	2 (mg/m3)	Not Available

EMERGENCY LIMITS:

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
sodium hydroxide	0.5(ppm)	0.5(ppm)	0.5(ppm)	0.5(ppm)

Exposure controls:

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.
Personal protection	
Eye and face protection	Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure Chemical goggles.whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.Alternatively a gas mask may replace splash goggles and face shields.
Skin protection	See Hand protection below
Hand protection	Elbow length PVC gloves When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
Body protection	See Other protection below
Other protection	Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit.
Thermal hazards	

Recommended material(s)	Respiratory protection
GLOVE SELECTION INDEX	Not Applicable

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the
Calcium Test Solution #1

Material	CPI
BUTYL	A
NAT+NEOPR+NITRILE	A
NATURAL RUBBER	A
NATURAL+NEOPRENE	A

NATURAL+NEOPRENE	A
NATURAL+NEOPRENE	A
NITRILE	A
NITRILE+PVC	A
PE	A
PE/EVAL/PE	A
PVC	A
SARANEX-23	A
SARANEX-23 2-PLY	A
TEFLON	A
VITON/CHLOROBUTYL	A

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion

9. Physical and chemical properties

Appearance Clear	Clear strongly alkaline liquid with no odour; mixes with water.
Physical state	Liquid
Odour	Not Available
Odour threshold	Not Available
pH (as supplied)	13.3
Melting point / freezing point (°C)	Not Available
Initial boiling point and boiling range (°C)	Not Available
Flash point (°C)	Not Available
Evaporation rate	Not Available
Flammability	Not Available
Upper Explosive Limit (%)	Not Applicable
Lower Explosive Limit (%)	Not Applicable
Vapour pressure (kPa)	Not Available
Solubility in water (g/L)	Miscible
Vapour density (Air = 1)	Not Available
Relative density (Water = 1)	1.096
Partition coefficient n-octanol / water	Not Available
Auto-ignition temperature (°C)	Not Available
Decomposition temperature	Not Available
Viscosity (cSt)	Not Available
Molecular weight (g/mol)	Not Applicable
Taste	Not Available
Explosive properties	Not Available
Oxidising properties	Not Available
Surface Tension (dyn/cm or mN/m)	Not Available
Volatile Component (%vol)	Not Available
Gas group	Not Available
pH as a solution(1%)	Not Available
VOC g/L	Not Available

10. Stability and reactivity

Reactivity	See section 7
Chemical stability	Presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

11. Toxicological information

Inhaled	Inhalation of alkaline corrosives may produce irritation of the respiratory tract with coughing, choking, pain and mucous membrane damage.Pulmonary oedema may develop in more severe cases; this may be immediate or in most cases following a latent period of 5-72 hours. Symptoms may include a tightness in the chest, dyspnoea, frothy sputum, cyanosis and dizziness. Findings may include hypotension, a weak and rapid pulse and moist rales.
Ingestion	Ingestion of alkaline corrosives may produce immediate pain, and circumoral burns. Mucous membrane corrosive damage is characterised by a white appearance and soapy feel; this may then become brown, oedematous and ulcerated. Profuse salivation with an inability to swallow or speak may also result. Even where there is limited or no evidence of chemical burns, both the oesophagus and stomach may experience a burning pain; vomiting and diarrhoea may follow.
Skin Contact	The material can produce severe chemical burns following direct contact with the skin.Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep.Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.
Eye	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.Direct contact with alkaline corrosives may produce pain and burns. Oedema, destruction of the epithelium, corneal opacification and iritis may occur. In less severe cases these symptoms tend to resolve.
Chronic	Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis.

	TOXICITY	IRRITATION
Calcium Test Solution #1	Not Available	Not Available
sodium hydroxide	Not Available	Eye (rabbit): 0.05 mg/24h SEVERE Eye (rabbit):1 mg/24h SEVERE Eye (rabbit):1 mg/30s rinsed-SEVERE Skin (rabbit): 500 mg/24h SEVERE Not Available

Acute Toxicity	Not Applicable
Skin Irritation/Corrosion	Skin Corrosion/Irritation Category 1A
Serious Eye Damage/Irritation	Serious Eye Damage Category 1
Respiratory or Skin sensitisation	Not Applicable
Mutagenicity	Not Applicable
Carcinogenicity	Not Applicable
Reproductivity	Not Applicable
STOT - Single Exposure	Not Applicable
STOT - Repeated Exposure	Not Applicable
Aspiration Hazard	Not Applicable

CMR STATUS:

RESPIRATORY	sodium hydroxide	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - Respiratory	X
SKIN	sodium hydroxide	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - sKIN	X

12. Ecological information

Toxicity:
NOT AVAILABLE

Ingredient	Endpoint	Test Duration	Effect	Value	Species	BCF
CalciumTest Solution #1	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Prevent, by any means available, spillage from entering drains or water courses.
DO NOT discharge into sewer or waterways.

Persistence and degradability:

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential:

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil:

Ingredient	Mobility
Not Available	Not Available

13. Disposal considerations

Product / Packaging disposal:
Recycle wherever possible.Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.Treat and neutralise at an approved treatment plant.Treatment should involve: Neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licenced to accept chemical and /or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).

14. Transport information

Marine Pollutant	NO

Land transport (DOT):

UN number	1824	
Packing group	II	
UN proper shipping name	Sodium hydroxide solution	
Environmental hazard	No relevant data	
Transport hazard class(es)	Class 8	
Special precautions for user	Hazard Label	8
	Special provisions	B2, IB2, N34, T7, TP2

Air transport (ICAO-IATA / DGR):

UN number	18	
Packing group	II	
UN proper shipping name	Sodium hydroxide solution	
Environmental hazard	No relevant data	
Transport hazard class (es)	ICAO/IATA Class	8
	ICAO / IATA Subrisk	
	ERG Code	8L

	Special provisions	A3A803
	Cargo Only Packing Instructions	855
	Cargo Only Maximum Qty / Pack	30L
Special precautions for user	Passenger and Cargo Packing Instructions	851
	Passenger and Cargo Maximum Qty / Pack	1L
	Passenger and Cargo Limited Quantity Packing Instructions	Y840
	Passenger and Cargo Maximum Qty / Pack	0.5L

15. Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture:
sodium hydroxide(1310-73-2) is found on the following regulatory lists:

16. Other information

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.