Material Safety Data Sheet

Sodium Chlorite Solution 31 Percent (RXSOL-42-1977-125)

1. Product and Company Identifaction

Porduct Name	Sodium Chlorite Solution
Part Number	RXSOL-42-1977-250

Company Details:

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

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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Email	mail@rxmarine.com
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2. Composition / informationon ingredients

Product name	Cas No	Weight
Sodium Chlorite Solution	7758-19-2	30-35%

3. Hazards Identification

Signal Word	Danger
Hazard Statements	CORROSIVE. HARMFUL OR FATAL IF SWALLOWED. TOXIC IF INHALED. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE DAMAGE TO RESPIRATORY SYSTEM AND BLOODDried material can ignite upon contact with combustibles. AQUATIC TOXICITY: Harmful to aquatic life
Precautionary statements	Wash thoroughly after handling. Wear protective gloves, protective clothing, eye, and face protection. Do not eat, drink or smoke when using this product. Do not breathe mist, vapours, or spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Keep container tightly closed. Store in a secure manner. Always package, store, transport and dispose of all waste and contaminated equipment in accordance with all applicable federal, state, and local health and environmental regulations. Do not contaminate with acids, reducing agents, combustible materials, oxidizing materials, hypochlorite, organic solvents and compounds, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfurcontaining rubber, or any other foreign matter.
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

4. First Aid Measures

General advice	Chlorine dioxide vapors are emitted when this product contacts acids or chlorine. If these vapors are inhaled, monitor patient closely for delayed development of pulmonary edema which may occur up to 48-72 hours postinhalation. Following ingestion, neutralization and use of activated charcoal is not indicated. Probable mucosal damage may contraindicate the use of gastric lavage.
If inhaled	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation and/or Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.

Eye Contact	Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY
Swallowed	Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY
Skin Contact	Remove contaminated clothing, jewelry, and shoes immediately. Immediately flush contaminated areas with water. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.
Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Flammability	No data available
Suitable extinguishing media	Use extinguishing agents appropriate for surrounding fire.
Unsuitable extinguishing media	No data available
Special hazards arising from the substance or mixture	No data available
Further information	No data available
Hazardous combustion products	Chlorine, Oxides of sodium
Advice for firefighters	Negligible fire hazard. Avoid evaporation to dryness. Dried material can ignite upon contact with combustibles. This product may represent an explosion hazard if it contacts acids, chlorine, or organic materials (Refer to Section 10)
Protective Equipment	Wear NIOSH approved positive-pressure self-contained breathing apparatus. Consider evacuation of personnel located downwind. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary people away, isolate hazard area and deny entry. Contain spill. Spill materials may be absorbed using nonflammable commercial absorbents. Dampen and scoop spilled material into clean, dedicated equipment. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up. Keep collected material damp and put into drums. Dispose promptly. Dried material can ignite upon contact with combustibles. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.
Spillage	No data available
Personal Protection	No data available
Enviromental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	No data available
Reference to other sections	No data available

7. Handling and Storage

Advice on safe handling	Do not taste or swallow. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mist when opening container. Avoid creation of vapor or mist. Wash thoroughly after handling. Use clean utensils. Do not add the product to any dispensing device containing residuals of other products. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with acids, reducing agents, combustible materials, oxidizing materials, hypochlorite, organic solvents and compounds, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter. Dried material can ignite upon contact with combustibles.
Conditions for safe storage including any incompatibilities	No data available
Storage conditions	Store and handle in accordance with all current regulations and standards. Keep container properly labeled and tightly closed. Store in a cool, dry area. Store in a well-ventilated area. Store below 212 F (100 C). Avoid exposure to sunlight or ultraviolet light. Keep separated from incompatible substances (see Section 10 of the Safety Data Sheet).

8. Exposure controls and personal protection

Exposure controls	Personal protective equipment
Engineering Control	Use only in well-ventilated areas. Provide local exhaust ventilation where vapors, mist or aerosols may be generated.
Eye/face protection	Wear chemical safety goggles. Where splashing or spraying is possible, use a faceshield in addition to chemical protective goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area
Body Protection	Wear appropriate chemical resistant glove Neoprene
Skin protection	Wear protective clothing to minimize skin contact. Contaminated clothing should be removed and laundered before reuse. Discard contaminated leather goods.
Respiratory protection	A NIOSH approved full-face respirator equipped with N95 (dust, fume, mist) cartridges may be permissible when symptoms have been observed that are indicative of overexposure. If chlorine or chlorine dioxide is present, an acid gas cartridge is also required. An approved self-contained breathing apparatus operated in the pressure demand mode or an airline respirator with escape pack is required when an air purifying respirator is not adequate or for spills / emergencies of unknown concentrations. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.
Other Protection Measure	No data available

9. Physical and chemical properties

Physical state	Liquid
Colour	Pale, yellow
Odour	Slight chlorine odor
Odor Threshold	No data available
pH	>12 @ 25 C
Melting Point	No data available
Boiling Point	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	No data available
Viscosity	No data available
Relative Density	No data available
Specific Gravity	1.1 to 1.3 @ 25 C
Partition coefficient	No data available
Explosive properties	No data available

Solubility	No data available
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Stable at normal temperatures and pressures.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibilityof hazardous reactions	Violent reactions possible with Strong oxidizing agents Hydrogen halides Fluorine nitrogen dioxide hydrides Chlorine
Conditions to avoid	Avoid heat, flames, sparks and other sources of ignition. Avoid evaporation to dryness. Dried material can ignite upon contact with combustibles. Avoid contamination with foreign materials. Avoid exposure to sunlight or ultraviolet light.
Incompatible materials	Acids, Reducing agents, Combustible material, Oxidizing agents, Hypochlorite, Organic solvents and compounds, Garbage, Dirt, Organic materials, Household products, Chemicals, Soap products, Paint products, Vinegar, Beverages, Oils, Pine oil, Dirty rags, Sulfur-containing rubber, or any other foreign matter
Hazardous decomposition products	Chlorine dioxide is formed on contact with acids, Thermal decomposition products include chlorine and oxides of sodium

11. Toxicological information

Acute toxicity	LD50 Oral: 389 - 1800 mg/kg (Rat) LC50 Inhalation: 0.29 mg/L (4 hr-Rat) LD50 Dermal: > 2 gm/kg skin-rabbit Mist or spray may cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. In some cases, pulmonary edema may develop. Skin contact may cause severe irritation, pain, and possibly burns. Direct eye contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. Ingesting the material may cause immediate pain and severe burns of the mucous membranes. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the esophagus and gastrointestinal tract may range from irritation to severe corrosion to death. Edema of the epiglottis and shock may occur
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Carcinogenicity	This product is not classified as a carcinogen by NTP, IARC or OSHA.
Germ cell mutagenicity	Sodium chlorite has tested positive in some studies. The significance of these test results for human health is unclear because the oxidizing effects of the chlorite or salting effects of sodium may significantly affect the ability of the tests to accurately detect mutagens
Reproductive toxicity	There is limited evidence of male reproductive effects in animal studies.
Specific target organ toxicity - single exposure	No data available
Additional Information	No data available

12. Ecological information

Persistence and degradability	Chlorite ions are reduced by some bacteria under anaerobic conditions. PERSISTENCE: This material will eventually degrade to sodium chloride.
Toxicity to fish	No data available
Toxicity to daphnia and other aquatic invertebrates	LC50 Daphnia Magna = 0.29 mg/L as 80% $NaClO_2$ (48 hour)
Toxicity	LC50 rainbow trout = 290 mg/l as 80% $NaClO_2$ (96 hour); Bluegill = 265-310 mg/l as 80% $NaClO_2$ (96 hour); Sheepshead minnow = 62-90 ppm (96 hour)LD50 Mallard duck = 0.49-1.00g/kg as 80% $NaClO_2$ (gavage); LD50 Bob White quail = 0.39 - 0.66 g/kg as 80% $NaClO_2$ (gavage); Sodium chlorite in the diet of birds was not acutely toxic. Eight-day dietary LC50's in the Mallard duck and Bob White quail were > 5,000 ppm
Toxicity to bacteria	No data available

Toxicity to algae	No data available
Bioaccumulation potential	No data available
Mobility in soil	No data availalble
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting propertiesaccording to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	No data available

13. Disposal considerations

Waste from material	Dispose in accordance with all applicable regulations. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction and fire. Contact Customer Service to obtain neutralization instructions. Keep out of water supplies and sewers. May be subject to disposal regulations: U.S. EPA 40 CFR 261. Hazardous Waste Number(s): D001, D003.
Contaminated packaging	Container management: Containers are non-refillable. Do not reuse or refill containers. Offer for recycling if available. Offer for reconditioning if appropriate. Triple rinse or pressure rinse container promptly after emptying. Triple rinse containers 5-gallons or smaller as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Triple rinse containers larger than 5 gallons as follows: Empty remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse about 40 PSI for at least 30 seconds. Drain for 10 seconds, after the flow begins to drip.
Waste treatment Method	No data available

14. Transport information

UN number	ADR/RID:1908	IMDG:1908	IATA:1908
UN proper shipping name	ADR/RID:Chlorite solution	IMDG:Chlorite solution	IATA:Chlorite solution
Transport hazard class(es)	ADR/RID:8	IMDG:8	IATA:8
Packaging group	ADR/RID:ll	IMDG:ll	IATA:ll
Environmental hazards	ADR/RID:No	IMDG:No	IATA:No
Special precautions for user	No data available		
Further information	No data available		

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) (US)
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work
Chemical Safety Assessment	A Chemical Safety Assessment has been carried out for this substance.

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.