1. Product and Company Identifaction

www.rxmarine.com

Product Name	: Sodium Chlorite Solution 7.5%
Part Number	: RXSOL-42-1977-030

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

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

Phone	+91 22 20871200 - 1400
Fax	+91 22 2761 2100 :::AOH :0091 9821214367
Email	123@rxmarine.com
Website	www.rxmarine.com

2. Composition / Information on ingredients

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Name of Substance	Cas Number
Sodium Chlorite	7758-19-2
Sodium Hydroxide	1310-73-2
Sodium Carbonate	497-19-8
Non Hazardous Compound	Proprietory

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H302 Harmful if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects. EUH032 Contact with acids liberates very toxic gas.
Precautionary statements - prevention	P260 Do not breathe vapour/spray. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection
Precautionary statements - response	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. 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. P391 Collect spillage. P405 Store locked up. P501 Dispose of contents/container in accordance with national regulations.

4. First Aid Measures

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Eye Contact	Hold eye open and rinse slowly and gently with present, after the first five minutes, then continue r
Skin Contact	Wash off immediately with soap and plenty of wa Get medical attention if irritation persists.
Inhalation:	If inhaled, remove from area to fresh air. Get m breathing becomes difficult.
Ingestion:	If swallowed, call a poison control center or docto drink plenty of water.
General Advice	Chlorine dioxide vapors are emitted when this p inhaled, monitor patient closely for delayed deve 48-72 hours post inhalation. See Section 11 for To

5. Fire-fighting Measures

Flamibility / Flash point	Not Applicable
Suitable extinguishing media	Extinguish with carbon dioxide, dry chemical, foa
Protective Equipment	Use personal protective equipment.
Hazardous combustion products	Disodium oxide. Hydrogen chloride. Oxygen. Co chlorine donors will produce chlorine dioxide ga keep the chlorine dioxide concentration low.
Advice for firefighters	As in any fire, wear self-contained breathing appa
Specific extinguishing methods	Approach fire from upwind to avoid hazardous v quantities of water as fog or spray. This product l use water spray to keep fire-exposed containers c fire. Firefighters should wear full protective clothi positive pressure self-contained breathing apparatu

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Immediately evacuate personnel to safe areas. Ke and upwind of spill/leak. Wear appropriate protec touch damaged containers or spilled material authorities should be advised if significant spill section 8 of the SDS. DO NOT USE RAGS, SAW
Enviromental Precaution	Avoid release to the environment. Avoid discharg local authorities in case of spillage to drain/aquati
Methods and materials for containment and cleaning up	Isolate spill area and deny entry to unnecessary o such as flames, hot glowing surfaces or electric appropriate personnel. Cleanup personnel must Notify all downstream water users of possible con

7. Handling and Storage

Advice on safe handling	Use only in a well-ventilated area. Wear chemical breathe mist or vapor. Do not taste or swallow. Ke open flame, sources of heat or sources of ignitio product dry. When using, do not eat, drink or s materials. Observe good industrial hygiene practic
Storage	Store in a cool, dry place out of direct sunlight. clearly identified, clear of obstruction and access from incompatible materials (see Section 10 of th store near combustible materials. Do not handle ignition.
Advice on general occupational hygiene	Use good work and personal hygiene practices to Wash hands before eating, drinking or smoking R

8. Exposure controls and personal protection

Engineering Controls	Good general ventilation (typically 10 air changes matched to conditions. If applicable, use process en controls to maintain airborne levels below recomm established, maintain airborne levels to an accepta system to capture mist or fume. Do not use wood entry into bearings or gear boxes, which could caus
Personal Protection	**Eye/face protection :** Wear safety glasses with s emergency eye wash fountain and quick drench sho **Skin protection:** Hand protection Gloves impervious to the materia gloves. Advice should be sought from glove supplie **Respiratory protection** : In case of insufficien NIOSH/MSHA approved air-purifying respirator pressure, air-supplied respirator may be used to respirator if there is any potential for an uncontroll circumstances where airpurifying respirators may selected based on the form and concentration of c CFR 1910.134). Seek advice from respiratory prot
Exposure Conrol	All chemical Personal Protective Equipment (PPE) chemical hazard present and the risk of exposure t based on an assessment of the chemical hazards as in a mixture with other products or fluids, add assessment of risk may be required. The risk of from workplace to workplace and should be assesse
Hygiene measures	Keep from contact with clothing and other con clothing promptly. Upon completion of work, wash facilities. When using do not smoke. Always obse after handling the material and before eating, drink protective equipment to remove contaminants.

Gloves

Suit

9. Physical and chemical properties

Form	Liquid
Apperance	Clear, water white to slightly yellow
Odour	Faint bleach-like odour
Odor threshold	Not applicable
Flash Point	Not Determine
Boiling Point	106 °C (1013 hPa)
Freezing Point	3°C (37.4°F)
pH	11-13
Evaporation rate	No information available
Flammability (solid, gas)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available

Explosive properties	No data available
Vapor pressure	19.87 hPa (20?)
Vapor density	No information available
Specific gravity	1.01 - 1.04 @ 20`C
Relative density	Not Availabe
Water solubility	Miscible in water
Solubility in other solvents	No data available
Partition coefficient: octanol	No data available
Autoignition temperature	No data available
Thermal decomposition	No data available
Viscosity, kinematic	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Dynamic viscosity	No data available
Formula	NaClO2
Molecular Weight	90.45

10. Stability and reactivity

Recativity	Not reactive under normal temperatures and pressures
Stability	Stable in itself, but reactive as detailed below.
Possibility of hazardous reactions	Avoid heat, flames, sparks and other sources of ignition. Avoid evaporation to dryness. Dried material can ignite up 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.garbag materials. household products. chemicals. soap products. paint products. vinegar, beverages,oils, pine oil, dirty rags, su rubber, or any other foreign matter.
Hazardous Decomposition	Chlorine dioxide is formed on contact with acids, Thermal decompositionproducts include chlorine and oxides of sodiu
Condition to Avoid	Keep away from heat, sparks and open flame. Keep away from direct sunlight and contact with incompatible material may react with reducing agents.
Polymerization	Hazardous polymerization does not occur.

11. Toxicological information

Acute toxicity

INHALATION
Inhalation may cause irritation of the mucous membranes and respiratory tract. Symptoms may include coughing, bloody nose, and sneezing. Severe overexposures may cause lung damage.
ANIMAL TOXICOLOGY
Inhalation LC50: No available data
Dermal LD50: > 2 g/kg (rabbit)
Oral LD50: 165 mg/kg (rat)

CHRONIC TOXICITY

INHALATION
There is no available data on the chronic effects of inhaling sodium chlorite.
SKIN
There are no studies or reports on the repeated effects of dermal exposure to sodium chlorite. Because of the acute effects, repeated direct contact may be unlikely
INGESTION
The chronic ingestion of low concentrations of this product has been studied in laboratory animals. Concentrations in the drinking water of 100 ppm and higher have been shown to cause mild anemia and a minor suppression of thyroid functions in laboratory animals. All effects were reversible after cessation of treatment. Clinical studies of communities using sodium chlorite as a disinfectant found no adverse effects in the human population studied. However, other studies have suggested that those individuals deficient in an enzyme (G6PD) utilized in hemoglobin synthesis might be susceptible to the development of anemia if exposed repeatedly. Repeated exposures to solutions of chlorine dioxide at concentrations of 10-100 ppm have produced slight effects upon the thyroid in younger animals and the hematologic system. Exposures to these concentration can reduce the cellular and blood levels of glutathione, an agent which is protective against the oxidizing effect of

	this chemical. Exposure of laboratory animals above 100 ppm in the drinking water have shown a decrease in blood cell glutathione, red blood cell count and hemoglobin. In some studies these levels also caused a slight decrease in thyroid hormones,especially in younger animals. **CARCINOGENICITY** Sodium chlorite is not listed by NTP, IARC, OSHA, EPA, or any other authority as a carcinogen. Carcinogenicity studies conducted in mice and rats did not show an increase in tumors in animals exposed to sodium chlorite in their drinking water. **MUTAGENICITY** Sodium chlorite has been evaluated for possible mutagenic effects in several laboratory tests. Sodium chlorite tested positive in the Ames Salmonella reverse mutation assay without metabolic activators and caused chromosomal aberrations in an in vitro Chinese hamster fibroblast cell line without metabolic activators. Sodium chlorite also tested positive in the mouse micronucleus assay when administered intraperitoneally (directly into the body cavity), but was not mutagenic when administered orally. 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	Sodium chlorite has not been found to be teratogenic in studies in which animals have been exposed up to 100 ppm in the drinking water. Male rats repeatedly exposed to concentrations of 100 ppm or greater in the drinking water have shown slight effects on sperm motility. No effects were observed at 10 ppm and no effects were observed on fertility rate, histology of the male reproductive system or conception rate of animals exposed at 10 ppm or higher. The CMA conducted a two-generation reproductive rat study with developmental neurotoxicity to evaluate the effects of sodium chlorite on reproduction and pre- and postnatal development when administered orally via drinking water for two successive generations. Sodium chlorite was administered at 0, 35, 70, and 300 ppm in drinking water to male and female Sprague Dawley rats for ten weeks prior to mating. Dosing continued during the mating period, pregnancy and lactation. The final report concluded that there were no meaningful treatment related effects at any dose level for systemic, reproductive/ developmental, and developmental neurological end points. Hematological effects and reduced body weight gains were observed in some treatment groups.
Aspiration hazard	Not applicable.
Other information	Key literature references and sources for data. See Section 16 for more information.

12. Ecological information

Toxicity	This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority.
Aquatic Toxicity	LC50 rainbow trout = 290 mg/l as 80% NaClO2 (96 hour); bluegill = 265-310 mg/l as 80% NaClO2 (96 hour); Sheepshead minnow = 62-90 ppm (96 hour).
Invertebrate Toxicity	LC50 Daphnia Magna = 0.29 mg/L as 80% NaClO2 (48 hour)
Other Toxicity	Acute TL50 for Rainbow Trout: 50.6 mg/l (as 80% NaClO2) Acute LC50 (96 Hours) for Rainbow Trout: 290 mg/l (as 80% NaClO2) Acute TL50 for Bluegill: 208 mg/l (as 80% NaClO2) Acute LC50 (96 Hours) for Bluegill: 265-310 mg/l (as 80% NaClO2) Acute LD50 Mallard Ducks: 0.49-1.00 g/kg (gavage) (as 80% NaClO2) Acute LD50 Bobwhite Quail: 0.66 g/kg (gavage) (as 80% NaClO2) Acute LC50 (48 Hours) for Daphnia Magna: 0.29 mg/l (as 80% NaClO2) Sodium chlorite in the diet of birds was not acutely toxic. Eight-day dietary LC50's in mallard ducks and bobwhite quail were both greater than 10,000 ppm in the diet
Biodegradatio	This material is inorganic and not subject to biodegradation; however, chlorite ions arereduced by some bacteria under anaerobic conditions. This material will eventually degrade to sodium chloride.
Persistence	This material will eventually degrade to sodium chloride.

13. Disposal considerations

Remarks	Dispose in accordance with all applicable regulati partially filledcontainers into the trash or waste c cause a reaction and fire. Contact Technical Serv water supplies and sewers. May be subject to dispos
Waste Disposal	The product should not be allowed to enter drains, preferred to disposal or incineration. If recycling i regulations. Dispose of wastes in an approved waste

14. Transport information

Regulatory Information	UN Number	Proper Shipping Name	Classes	Packing Group	Other Information
DOT Classification	UN1908	Chlorite solution	8	II	Marine Pollutant A3, A6, A7, B2, IB2, N34, T7, TP2, TP24
IMDG Class	UN1908	Chlorite solution	8	II	Marine Pollutant Emergency schedules (EmS) F-A, S-B
IATA-DGR Class	UN1908	Chlorite solution	8	II	Marine Pollutant Passenger aircraft 851: 1 L Cargo aircraft 855: 30 L

15. Regulatory information

Regulations	OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA H 1910.1200) CERCLA SECTIONS 102a/103 HAZARDOUS SUB Not regulated. SARA EHS Chemical (40 CFR 355.30) Not regulated EPCRA SECTIONS 311/312 HAZARD CATEGORI Acute Health Hazard EPCRA SECTION 313 (40 CFR 372.65): Not regulated. OSHA PROCESS SAFETY (PSM) (29 CFR 1910.11 Not regulated
International inventories	WORKPLACE HAZARDOUS MATERIALS INFO CLASSIFICATION WHMIS Classifications applicable to this product: E (Corrosive Material) based on assignment to TDG C CANADIAN ENVIRONMENTAL PROTECTION A All components of this product are on the Domestic S HAZARDOUS PRODUCTS ACT This product has been classified in accordance with th Products Regulations (CPR)
Europe	EINECS No.: 231-836-6 STATE REGULATIONS CALIFORNIA PROPOSITION 65 Sodium Chlorite does not appear on the California Pr

Other Information

The information above is believed to be accurate
available to us. However, we make no warranty of
implied, with respect to such information, and we
should make their own investigations to deter
particular purposes. In no event shall be liable for an
for lost profits or any special, indirect, incidental,
arising, even if **RX Marine International** has been

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believe are reliable. However, the information is pr
regarding its correctness. The conditions or methods
are beyond our control and may be beyond our kn
assume responsibility and expressly disclaim liability
any way connected with the handling, storage, use or
and is to be used only for this product. If the produc
MSDS information may not be applicable.