

## 1. Product and Company Identification

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Product Name Sodium Hypo Chlorite 4-6 Percent  
Part Number RXSOL-40-1913-210

### Company Details:

RX MARINE INTERNATIONAL  
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## 2. Composition / Information on ingredients

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Product name	Cas No	EC No	Weight	Formula
Sodium hypochlorite solution approximately 4 % w/v available chlorine EMPLURA®	7681-52-9	231-668-3	74-439	ClNaO

## 3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects
Precautionary statements	P234 Keep only in original packaging. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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

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General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance
If inhaled	fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
Eye Contact	After eye contact rinse out with plenty of water. Remove contact lenses.

Swallowed	After swallowing make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delay	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

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Flammability	No data available
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given
Special hazards arising from the substance or mixture	Hydrogen chloride gas Sodium oxides Not combustible. Fire may cause evolution of: Hydrogen chloride gas Ambient fire may liberate hazardous vapours.
Further information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

## 6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	No data available
Personal Protection	No data available
Environmental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to other sections	For disposal see section 13.

## 7. Handling and Storage

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Advice on protection against fire and explosion	No data available
Incompatible materials	No data available
Hygiene measures	No data available
Advice on safe handling	For precautions see section 2.2
Conditions for safe storage including any incompatibilities	No data available
Storage conditions	No metal containers. Protected from light. Tightly closed. Do not store near acids. Recommended storage temperature see product label.

Storage class	Storage class (TRGS 510) 8B Non-combustible, corrosive hazardous materials
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	No data available

## 8. Exposure controls and personal protection

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Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Protective clothing
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: <a href="http://www.kcl.de">www.kcl.de</a> ). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: <a href="http://www.kcl.de">www.kcl.de</a> ). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L
Respiratory protection	Recommended Filter type Filter B-(P3) The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	No data available

## 9. Physical and chemical properties

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Physical state	Liquid
Colour	Light green
Odour	of chlorine
Odor Threshold	No data available
pH	12 - 13 at 20 °C
Melting Point	-20 °C
Boiling Point	102 °C at 1.013 hPa
Flash Point	9,7 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9
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	455,0 °C at 1.013 hPa - DIN 51794
Decomposition temperature	Distillable in an undecomposed state at normal pressure.
Vapour pressure	20 hPa at 20 °C
Viscosity	Dynamic 2,8 mPa.s at 20 °C
Density	1,22 g/cm <sup>3</sup> at 20 °C
Relative Density	No data available
Specific Gravity	No data available

Partition coefficient	Log Pow -0,77 - (Lit.), Bioaccumulation is not expected.
Explosive properties	No data available
Solubility	at 20 °C soluble
Ignition temperature	No data available
Particle characteristics	No data available

## 10. Stability and reactivity

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Reactivity	Contact with acids liberates toxic gas.
Chemical stability	heat-sensitive Sensitivity to light Sensitive to air. The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Risk of explosion with Acids hydrochloric acid nitrous gases Chlorine Nitric acid Cyanides Oxidizing agents Reducing agents oxalic acid Organic Substances Methanol urea Acetic anhydride Ammonia Millipore-1.93607 Page 8 of 14 The life science business of Merck operates as MilliporeSigma in the US and Canada Amines formic acid Risk of ignition or formation of inflammable gases or vapours with: arsenic Violent reactions possible with: Generates dangerous gases or fumes in contact with: Acids The generally known reaction partners of water
Conditions to avoid	Avoid shock and friction.
Incompatible materials	Metals
Hazardous decomposition products	In the event of fire: see section 5

## 11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - male - 1.100 mg/kg (OECD Test Guideline 401) Inhalation: No data available LD50 Dermal - Rabbit - male and female - > 20.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitization	Guinea pig Not a skin sensitizer. (OECD Test Guideline 406)
Carcinogenicity	Did not show carcinogenic effects in animal experiment
Germ cell mutagenicity	Mutagenicity (micronucleus test) Species: Mouse - male negative
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Additional Information	The substance/mixture does not contain components considered to have endocrine disrupting properties according 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 dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice

## 12. Ecological information

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Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 0,08 mg/l - 96 h Remarks: (Regulation (EC) No 1272/2008, Annex VI) (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,04 mg/l - 48 h Remarks: (Regulation (EC) No 1272/2008, Annex VI) (ECOTOX Database)
Toxicity	Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia similis (Water flea) - > 100 mg/l - 48 h (Regulation (EC) No. 440/2008, Annex, C.2)

Toxicity to bacteria	Static test EC50 - activated sludge - 77,1 mg/l - 3 h (OECD Test Guideline 209) Remarks: (ECHA)
Toxicity to algae	Static test ErC50 - Pseudokirchneriella subcapitata - 0,036 mg/l - 72 h (OECD Test Guideline 201) static test EC10 - Pseudokirchneriella subcapitata - 0,02 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	No data available
Mobility in soil	No data available
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 properties according 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	Forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift. Discharge into the environment must be avoided.

### 13. Disposal considerations

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Product	No data available
Contaminated packaging	No data available
Waste treatment Method	No data available

### 14. Transport information

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UN number	ADR/RID:1791 IMDG:1791 IATA:1791
UN proper shipping name	ADR/RID:HYPOCHLORITE SOLUTION IMDG:HYPOCHLORITE SOLUTION IATA:HYPOCHLORITE SOLUTION
Transport hazard class(es)	ADR/RID:8 IMDG:8 IATA:8
Packaging group	ADR/RID:II IMDG:II IATA:II
Environmental hazards	ADR/RID:Yes IMDG Marine pollutant:Yes IATA: No
Special precautions for user	Tunnel restriction code (E)
Further information	No data available

### 15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	A Chemical Safety Assessment was not carried out for this substance.

### 16. Other information

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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 we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular
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