# 1. Product and Company Identifaction

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Product Name Strontium peroxide
Part Number RXSOL-19-3254-025

Company Details:....

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

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# 2. Composition / Information on ingredients

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Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No1272/2008
Strontium peroxide	1314-18-7	EEC No. 215-224-6	90-95	STOT SE 3 (H335)
				Skin Irrit. 2 (H315)
				Eye Irrit. 2 (H319)
				Ox. Sol. (H272)

## **REACH registration number**

## 3. Hazards Identification

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Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Physical hazards

Oxidizing solids Category 2 (H272) **Health hazards** 2 Skin corrosion/irritation

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Specific target organ toxicity - (single exposure)

Skin Corrosion/Irritation	
Serious Eye Damage/Eye Irritation	
Specific target organ toxicity - (single exposure)	
Environmental hazards	1B Skin sensitization
Based on available data, the classification criteria are not met	
Label elements	
Hazard Statements	H272 - May intensify fire; oxidizer
	H315 - Causes skin irritation
	H335 - May cause respiratory irritation
Precautionary Statements	H319 - Causes serious eye irritation P280 Wear protective gloves and eye protection or face protection.
	P261 Avoid breathing mist or vapour or spray.
	P271 Use only outdoors or in a well-ventilated area.
	P273 Avoid release to the environment.
	P210 Keep away from heat, hot surfaces, sparks, open flames and other
	ignition sources. No smoking.
	P272 Contaminated work clothing should not be allowed out of the workplace.
	P264 Wash contaminated body parts thoroughly after handling.
	P210 - Keep away from heat, hot surfaces, sparks, open flames and othe ignition sources. No smoking
	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
	P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
	P280 - Wear protective gloves/protective clothing/eye protection/face protection
	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present andeasy to do. Continue rinsing
Precautionary Statements (Response):	P312 Call a POISON CENTER or physician if you feel unwell.
	P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for
	breathing.
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
	P333 + P313 If skin irritation or rash occurs: Get medical attention.
	P332 + P313 If skin irritation occurs: Get medical attention.
	P362 + P364 Take off contaminated clothing and wash it before reuse.
	P370 + P378 In case of fire: Use water spray, dry powder, foam, carbon

dioxide or

dry sand for extinction.

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dry sand for extinction.

. Other hazards No information available

## 4. First Aid Measures

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#### **Description of first aid measures**

Eye Contact

Skin Contact

Ingestion Inhalation

contaminated clothes and shoes. Get medical attention. Clean mouth with water. Get medical attention.

15 minutes. Getmedical attention.

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Rinse immediately with plenty of water, also under the eyelids, for at least

Wash off immediately with soap and plenty of water while removing all

eye specialist. Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an

eye specialist.

#### **Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautionstoprotect themselves and prevent spread of contamination..

#### Most important symptoms and effects, both acute and delayed

No information available.

#### . Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

## 5. Fire-fighting Measures

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#### **Extinguishing media**

Suitable extinguishing media

Extinguishing media which must not be used for safety reasons Special hazards arising from the substance or mixture Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

No information available.

Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard.

In a fire or if heated, a pressure increase will occur and the container may burst, with the

risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along

the ground. Vapors may accumulate in low or confined areas or travel a considerable

distance to a source of ignition and flash back.

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distance to a source of ignition and flash back.

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

#### **Hazardous Combustion Product**

None under normal use conditions.

#### . Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

 $. \ \underline{\textbf{Personal precautions, protective equipment and emergency}}$ 

procedures

Ensure adequate ventilation.

**Environmental precautions** 

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material. Keep in suitable, closedcontainers for disposal.

Sweep up and shovel into suitable containers for disposal.

Refer to protective measures listed in Sections 8 and 13

## 7. Handling and Storage

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**Precautions for safe handling**Avoid contact with skin and eyes. Do not breathe dust, Handle product

only in closed system or provide appropriate exhaust ventilation. Keep under nitrogen. Keep away from clothing and other combustible

materials.

**Hygiene Measures**Handle in accordance with good industrial hygiene and safety practice.

Keep away from food, drink and animal feedingstuffs. Donot eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, beforere-use. Wash hands before breaks

and after work.

#### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials. Keepundernitrogen. Keep containers tightly closed in a dry, cool and well-ventilated place.

**Technical** No substance specific occupational exposure limits known.

Rules for Hazardous Substances (TRGS) 510 Storage Class/LGK 5.1B

Storage Class (LGK) (Germany)

Switzerland - Storage of hazardous substances Storage class - SC 5 https://www.kvu.ch/de/themen/stoffe-und-produkte

https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

Specific end use(s)

Use in laboratories

## 8. Exposure controls and personal protection

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**Control parameters** 

Exposure limits This product, as supplied, does not contain any hazardous materials with

occupational exposure limits established by theregionspecific regulatory

bodies

Biological limit values This product, as supplied, does not contain any hazardous materials with

biological limits established by the region specific regulatory bodies

Monitoring methods BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for

the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) / Derived Minimum Effect Level

(DMEL)

No information available

**Predicted No Effect Concentration (PNEC)** 

No information available

**Exposure controls** 

**Engineering Measures**Ensure adequate ventilation, especially in confined areas. Ensure that

eyewash stations and safety showers are closetotheworkstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of processorequipment changes

to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at

source

Personal protective equipment Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material Breakthrough time Glove thickness EU standard Glove comment Neoprene See manufacturers - EN 374

(minimumrequirement) recommendations

Skin and body protection

**Skin and body protection**Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection** When workers are facing concentrations above the exposure limit they

must useappropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the

correct fit andbeusedand maintained properly

Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator

if exposurelimits are exceeded or if irritation or other symptoms are

experienced

Recommended Filter type: Particulates filter conforming to EN 143

Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposurelimits are exceeded or if irritation or other

symptoms are experienced. Recommended half mask:- Valve filtering:

EN405; or; Half mask:

EN140; plusfilter, EN141 When RPE is used a face piece Fit Test should

be conducted

Environmental exposure controls No information available

## 9. Physical and chemical properties

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#### Information on basic physical and chemical properties

Physical StatePowder SolidAppearanceOff-whiteOdourOdorless

Odor Threshold No data available

Melting Point/Range 215 °C / 419 °F
Softening Point No data available

Boiling Point/Range No information available

Flammability (liquid) Not applicable

Flammability (solid,gas) No information available

Explosion Limits No data available

Flash Point No information available

materials. Extremely flammable in the presence of the following materials

or conditions: oxidizing

materials.

Autoignition Temperature No data available
Decomposition Temperature No data available

pH No information available

Viscosity Not applicable

Water Solubility slightly soluble in cold water Solubility in other solvents Partition Coefficient (n-octanol/water No information available

Vapor Pressure No data available
Density / Specific Gravity No data available
Bulk Density No data available
Vapor Density Not applicable
Particle characteristics No data available

#### Other information

Molecular FormulaO2 SrMolecular Weight119.62Oxidizing PropertiesOxidizer

Evaporation Rate Not applicable - Solid

## 10. Stability and reactivity

Possibility of hazardous reactions

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Reactivity No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Formation of

flammable gases:

Remarks: Forms no flammable gases in the

presence of water.

Chemical stability The product is stable if stored and handled as prescribed/indicated.

Explosion and fire hazard exists under confined conditions. Ignitable air

mixtures can form when the

product is heated above the flash point and/or when sprayed or atomized.

Formation of explosive

gas/air mixtures.

Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to

excessive heat. Risk of spontaneous polymerization when heated or in the presence of UV radiation.

With unstabilised product, spontaneous polymerisation may occur e.g. through ambient heat.

Polymerization coupled with heat formation. Polymerization produces gases which may burst closed

or confined containers. Reactions may cause ignition.

Risk of spontaneous polymerization by oxygen depletion of the liquid phase.

Radical formation can cause exothermic polymerization. Reacts with peroxides and other radical

components. Risk of spontaneous polymerization in the presence of starters for radical chain

reactions (e.g. peroxides). Reacts with nitric acid. Polymerizes explosively in contact with strong

oxidizing agents. Risk of spontaneous polymerization in the presence of oxidizing agents.

Hazardous reactions in presence of mentioned substances to avoid.

The product is stabilized against spontaneous polymerization prior to despatch. The product is stable

if stored and handled as prescribed/indicated.

Avoid heat. Avoid oxygen content above the product of less than 5 %. Do not blanket with nitrogen.

Avoid UV-light and other radiation with high energy. Avoid direct sunlight. Avoid prolonged storage.

Avoid inhibitor loss. Avoid excessive temperatures.

radical formers, free radical initiators, peroxides, mercaptans, nitrocompounds, perborates, azides, ether, ketones, aldehydes, amines, nitrates, nitrites, oxidizing agents, reducing agents, strong bases, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts Inert

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as

prescribed/indicated.

Thermal decomposition:

No data available

# 11. Toxicological information

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Primary routes of exposure

Conditions to avoid

**Incompatible materials** 

Hazardous decomposition products

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for

## **Acute Toxicity/Effects**

liquefied gases.

## Acute toxicity

Assessment of acute toxicity: Of low toxicity after single ingestion. Virtually nontoxic after a single

skin contact. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely

acute hazard.

## Oral

Type of value: LD50

Species: rat (male/female)

Value: approx. 4,435 mg/kg (BASF-Test)

## **Inhalation**

Species: rat

Value: (IRT)

Exposure time: 8 h

No mortality within the stated exposition time as shown in animal studies.

## **Dermal**

Type of value: LD50

Species: rabbit (no data)

Value: 7,522 mg/kg

#### Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. Skin contact causes irritation.

## Skin

Species: rabbit

Result: Irritant.

Method: BASF-Test

Information on: 2-ethylhexyl acrylate

Species: rabbit

Result: Irritant.

Method: BASF-Test

Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

## Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: sensitizing

Method: OECD Guideline 429

## Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: sensitizing

Method: OECD Guideline 429

## **Aspiration Hazard**

No aspiration hazard expected.

#### Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium

after repeated inhalation. After repeated exposure the prominent effect is local irritation.

## Genetic toxicity

Assessment of mutagenicity: In the majority of studies performed with microorganisms and in

mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed

in in vivo tests.

Chronic Toxicity/Effects

#### Carcinogenicity

Assessment of carcinogenicity: Long-term exposure to highly irritating concentrations resulted in skin

tumors in animals. A carcinogenic effect in humans can be excluded after brief skin contact. IARC

Group 3 (not classifiable as to human carcinogenicity).

## Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility

impairing effect. The product has not been tested. The statement has been derived from

substances/products of a similar structure or composition.

## **Teratogenicity**

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen

in animal studies. The product has not been fully tested. The statements have been derived in parts

from products of a similar structure or composition.

## 12. Ecological information

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## Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

#### Toxicity to fish

LC50 (96 h) 1.81 mg/l, Oncorhynchus mykiss (OECD Guideline 203, semistatic)

The statement of the toxic effect relates to the analytically determined concentration.

#### Aquatic invertebrates

EC50 (48 h) 1.3 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

#### Aquatic plants

EC50 (72 h) 1.71 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

The statement of the toxic effect relates to the analytically determined concentration.

#### Chronic toxicity to fish

Study not necessary due to exposure considerations.

## Chronic toxicity to aquatic invertebrates

EC10 (21 d) 0.91 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

Assessment of terrestrial toxicity

No effects at the highest test concentration.

The product has not been tested. The statement has been derived from substances/products of a

similar structure or composition.

## Soil living organisms

Toxicity to soil dwelling organisms:

EC50 (28 d) > 1,000 mg/kg, soil dwelling microorganisms (OECD 217, natural soil)

The product has not been tested. The statement has been derived from substances/products of a

similar structure or composition.

## Toxicity to terrestrial plants

No data available.

## Other terrestrial non-mammals

No data available.

## Microorganisms/Effect on activated sludge

## Toxicity to microorganisms

DIN EN ISO 8192 aquatic

activated sludge, domestic/EC20 (30 min): > 1,000 mg/l

Nominal concentration.

#### Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

Readily biodegradable (according to OECD criteria).

#### **Elimination information**

70 -  $80\ \%$  BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge, domestic)

## Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

## Information on Stability in Water (Hydrolysis)

t1/2 18.5 h (25 °C, pH value 11.0), (other, other)

t1/2 210 h (25 °C, pH value 7.0), (other, pH 7)

t1/2 533 h (25 °C, pH value 3.0), (other, other)

#### Assessment bioaccumulation potential

Does not accumulate in organisms.

## Bioaccumulation potential

Bioconcentration factor: 347 (28 d), Cyprinus carpio (OECD-Guideline 305)

Does not accumulate in organisms.

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

# 13. Disposal considerations

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Waste disposal of substance:

**Bioaccumulative potential** 

Mobility in soil

Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:

Uncleaned empties should be disposed of in the same manner as the contents. Flammable vapors may exist in containers in which residues of this product remain. Dispose of in accordance with national, state and local regulations.

# 14. Transport information

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Land transport

Not classified as a dangerous good under transport regulations

**TDG** 

Sea transport Not classified as a dangerous good under transport regulations

**IMDG** 

Air transport Not classified as a dangerous good under transport regulations

IATA/ICAO

## 15. Regulatory information

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#### **Federal Regulations**

Registration status:Chemical DSL, CA released / listedNFPA Hazard codes:Health: 2 Fire: 2 Reactivity: 2 Special:

#### Assessment of the hazard classes according to UN GHS criteria (most recent version):

Flam. Liq 4 Flammable liquids

STOT SE 3 (irritating to

respiratory system)

Specific target organ toxicity 2 single exposure3 (irritating to

respiratory system)

Specific target organ toxicity ? single exposure

2 Skin corrosion/irritation

2 Hazardous to the aquatic environment - acute

## 16. Other information

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Other Information

Skin Corr./Irrit.

Aquatic Acute

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