Material Safety Data Sheet

Citric Acid Monohydrate (RXSOL-61-6401-500)

1. Product and Company Identifaction

Product Name	**Citric Acid Monohydrate**
Product Type	**RXSOL-61-6401-500**

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

Phone	+91 22 65113333/ 5555 / 9999 / 27611360 / 27815540
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2. Composition / informationon ingredients

Formula	c6H8O7H2O(Hill)
EC-No.	201-069-1
Molar mass	210.14 g/mol

Hazardous components (REGULATION (EC) No 1272/2008):
Chemical Name (Concentration):

CAS-No.	Registration number	Classification
Citric acid monohydrate	(= 100 %)	
5949-29-1		

Eye irritation, Category 2, H319
A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
For the full text of the H-Statements mentioned in this Section, see Section 16.

3. Hazards Identification

Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.
Classification (67/548/EEC or 1999/45/EC)

Xi	Irritant	R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. First Aid Measures

After inhalation: Fresh air.
After skin contact: wash off with plenty of water. Remove contaminated clothing.
After eye contact: Rinse out with plenty of water. Call in ophthalmologist.
After swallowing: Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Most important symptoms and effects, both acute and delayed: Irritant effects, pain, Bloody vomiting
Indication of any immediate medical attention and special treatment needed: No information available.

5. Fire-fighting Measures

Suitable extinguishing media: Water, Carbon dioxide (CO2), Foam, Dry powder
Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given."
Special hazards arising from the substance or mixture:
CombustibleDevelopment of hazardous combustion gases or vapours possible in the event of fire. Risk of dust explosion.

Advice for firefighters:
Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:
Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions :Do not empty into drains.

Methods and materials for containment and cleaning up:
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: Indications about waste treatment see section 13.

7. Handling and Storage

Precautions for safe handling:
Advice on safe handling: Observe label precautions.

Hygiene measures: Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Storage conditions: Tightly closed. Dry. Recommended storage temperature see product label. Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls and personal protection

Control parameters: Contains no substances with occupational exposure limit values.

Exposure controls:
Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures: Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection:
Safety glasses:
Hand protection full contact:

Glove material:	:Nitrile rubber
Glove thickness:	:0.11 mm
Break through time:	:> 480 min

splash contact:

Glove material	:Nitrile rubber
Glove thickness	:0.11 mm
Break through time	:> 480 min

Other protective equipment protective clothing:
Respiratory protection: required when dusts are generated.

Empfohlener Filtertyp: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances The entrepeneur 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.

Environmental exposure controls: Do not empty into drains.

9. Physical and chemical properties

Information on basic physical and chemical properties:

Form	:Solid
Colour	:White
Odour	:Odourless
Odour Threshold	:Not applicable
pH	:No information available.
Melting point	:35 - 152 °C
Boiling point/boiling rang	:(Decomposition)
Flash point	:Not applicable
Evaporation rate	:No information available.
Flammability (solid, gas)	:No information available.
Lower explosion limit	:No information available.
Upper explosion limit	:No information available.
Vapour pressure	: 0.1 hPa at 20 °C (anhydrous substance)
Relative vapour density	:No information available
Relative density	:1.54 g/cm³at 20 °C
Water solubility	:Ca.1,630 g/lat 20 °C
Partition coefficient: noctanol/ water	:Log Pow: -1.72 (20 °C) OECD Test Guideline 117(anhydrous substance) Bioaccumulation is not expected.
Auto-ignition temperature	:No information available.
Decomposition temperature	:> 170 °C
Viscosity, dynamic	:No information available.
Explosive properties	:Not applicable
Oxidizing properties	:None

10. Stability and reactivity

Reactivity: Risk of dust explosion

Chemical stability: Releases water of crystallisation when heated. Possibility of hazardous reactions.

Violent reactions possible with: Metals, Oxidizing agents, Bases, Reducing agents

Conditions to avoid: Temperatures above melting point.

Incompatible materials: Metals

Hazardous decomposition products: No information available

11. Toxicological information

Acute oral toxicity
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.Acute inhalation toxicity.

Symptoms: Burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract Acute dermal toxicity This information is not available.

Skin irritation: Mixture causes burns.

Eye irritation: Mixture causes serious eye damage. Risk of blindness!

Sensitisation: This information is not available.

Germ cell mutagenicity: This information is not available.

Carcinogenicity: This information is not available

Reproductive toxicity: This information is not available.

Teratogenicity: This information is not available.

Specific target organ toxicity : Single exposure This information is not available.

Specific target organ toxicity: Repeated exposure This information is not available.

Aspiration hazard: This information is not available.

Further information: Substance which occurs in the human body under physiological conditions.Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

Toxicity to fish:
LC50 Leuciscus idus (Golden orfe): 440 - 760 mg/l; 96 h (anhydrous substance) (IUCLID) Toxicity to daphnia and other aquatic invertebrates

EC5 E.sulcatum: 485 mg/l; 72 h (anhydrous substance) (maximum permissible toxic concentration) (Lit.)

EC50 Daphnia magna (Water flea): Ca. 120 mg/l; 72 h (anhydrous substance) (IUCLID) Toxicity to algae IC5 M.aeruginosa 80 mg/l; 8 d (anhydrous substance) (maximum permissible toxic concentration) (Lit.)
Toxicity to bacteria

EC5 Pseudomonas putida: > 10,000 mg/l; 16 h (anhydrous substance) (Lit.)

Persistence and degradability: Biodegradability 98 %; 2 dOECD Test Guideline 302B (anhydrous substance)Readily eliminated from water Biochemical Oxygen Demand (BOD) 481 mg/g (5 d) (External MSDS) Chemical Oxygen Demand (COD) 685 mg/g (External MSDS)

Bioaccumulative potential: Partition coefficient: n-octanol/water log Pow: -1.72 (20 °C) OECD Test Guideline 117 (anhydrous substance) Bioaccumulation is not expected.

Mobility in soil: No information available.

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety ssessment not required/not conducted.

13. Disposal considerations

Disposal considerations:

Waste treatment methods: Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC aswell as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.See for processes regarding the return of chemicals and containers, or contact us there if you have further questions

14. Transport information

Land transport (ADR/RID): Not classified as dangerous in the meaning of transport regulations.

Inland waterway transport (ADN): Not relevant

Air transport (IATA): Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG): Not classified as dangerous in the meaning of transport regulations.Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:
Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulations:

Major Accident Hazard	96/82/EC
Legislation	Legislation Directive 96/82/EC does not apply
Substances of very high concern (SVHC)	This product does not contain substances of very high concern above the respective regulatory limit (> 0.1 % (w/w) Regulation (EC) No 1907/2006 (REACH), Article 57).
National legislation Storage class	10 - 13

Chemical Safety Assessment:
For this product a chemical safety assessment was not carried out.

16. Other information

Text of R and S phrase codes used in this safety data sheet:- R34: Causes burns; R36: Irritating to eyes; R37:Irritating to respiratory system; R41: Risk of serious damage to eyes. 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.