Material Safety Data Sheet

Oxalic Acid PWD (RXSOL-19-1303-050)

1. Product and Company Identifaction

Product Name	RXSOL-19-1303-050
Product Type	Oxalic Acid PWD 50

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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2. Composition / informationon ingredients

Chemica Name	CAS Number	Proportion	R Phrases*
Oxalic Acid	144-62-7	100%	R21/22 R41

*See Section 16

3. Hazards Identification

This material is hazardous according to criteria of ASCC; HAZARDOUS SUBSTANCE.
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Risk Phrases	Harmful in contact with skin and if swallowed. Risk of serious damage to eyes.
Safety Phrases	Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection.
Poisons Schedule	S6 Poison.

4. First Aid Measures

Inhalation	Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining.clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.
Skin Contact	If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact	Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.
Ingestion	Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Medical attention and special treatment:Treat symptomatically. Can cause corneal burns.

5. Fire-fighting Measures

Hazards from combustion products:
Non-combustible material.
Precautions for fire fighters and special protective equipment: Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable. protective clothing if risk of exposure to products of decomposition. Keep containers cool with water spray.
Suitable Extinguishing Media: Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

6. Accidental Release Measures

Emergency procedures: Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.
Methods and materials for containment and clean up: Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in dust. Sweep up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal.

7. Handling and Storage

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

Handling	Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation.
Storage	Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

8. Exposure controls and personal protection

Oxalic acid	8hr TWA = 1 mg/m3, 15 min STEL = 2 mg/m3
Product Name	OXALIC ACID Issued: 24/02/2009
Substance No	000030127001 Version: 2
TWA	The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.
STEL (Short Term Exposure Limit)	The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers. These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Engineering controls	Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use. Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards.

Personal Protective Equipment	The selection of PPE is dependant on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. Orica Personal Protection Guide No. 1, 1998: F - OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK. Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If dust exists, wear dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. Physical and chemical properties

Physical state	Granules or Crystals
Colour	White to Clear
Odour	Odourless
Solubility	Soluble in water , glycerol and alcohol. Partially soluble in ether. Insoluble in chloroform, petroleum ether and benzene
Specific Gravity	1.65 at 20°C
Vapour Density (air=1)	Not available
Vapour Pressure (20 °C)	0.14 Pa
Flash Point (°C)	Not applicable
Flammability Limits (%)	Not applicable
Autoignition Temperature (°C)	Not applicable
Melting Point/Range (°C)	101.5 (dihydrate)
Boiling Point/Range (°C)	149 - 160 (dihydrate)
Decomposition Point (°C)	Not available
pH	1.3 (0.1m soln)

10. Stability and reactivity

Chemical stability	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Vigorous reaction may occur with alkalies yielding heat and pressure, and with acid chlorides producing toxic fumes. May react violently with alkali metals producing flammable hydrogen gas. Reacts strongly with oxidising agents, especially sodium chlorite and sodium hypochlorite. Can react with some silver compounds to form explosive silver oxalates. Dry oxalic acid is not corrosive to metals. Hygroscopic.
Conditions to avoid	Avoid alkali material in storage and in use
Incompatible materials	Incompatible with most metals in the presence of moisture.
Hazardous decomposition products	Hydrogen. Carbon monoxide. Oxygen, which will support combustion.
Hazardous reactions	Reacts exothermically with alkalis . Accelerated decomposition occurs when mixed with strong oxidising agents.

11. Toxicological information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion	Swallowing can result in a severe burning pain of the mouth, throat and stomach followed by profuse vomiting (sometimes bloody). Small doses of oxalate in the body can cause headache, pain and twitching in muscles, and cramps. Larger doses can cause weak and irregular heartbeat, drop in blood pressure and signs of heart failure. Large doses rapidly cause a shock-like state, convulsions, coma and possibly death.
Eye contact	A severe eye irritant. Contamination of eyes can result in permanent injury.
Skin contact	Contact with skin may result in irritation. Solutions of 5% to 10% oxalic acid are irritating to the skin after prolonged exposure and can cause corrosive injury.
Inhalation	Breathing in dust may result in respiratory irritation.Inhaled oxalic acid is readily absorbed into the body and may cause headaches and nausea.
Long Term Effects	Long term exposure can result in kidney stones and stone formation in the urinary tract.
Toxicological Data	
Oral LD50 (rat)	475 mg/kg
Dermal LD50 (rabbit)	2000 mg/kg

Exposure to this compound can result in systemic effects including kidney damage, muscle twitching , cramps and nervous system complaints.

12. Ecological information

Ecotoxicity Avoid contaminating waterways.

13. Disposal considerations

Disposal methods	Refer to local government authority for disposal recommendations. Dispose of material through a licensed waste contractor.

14. Transport information

Road and Rail Transport:
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.
Marine Transport:
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.
Air Transport:
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

15. Regulatory information

Classification	This material is hazardous according to criteria of ASCC; HAZARDOUS SUBSTANCE.
Hazard Category	Xn: Harmful Xi: Irritant
Risk Phrase(s)	
R21/22	Harmful in contact with skin and if swallowed.
R41	Risk of serious damage to eyes.
Safety Phrase(s)	
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
Poisons Schedule	S6 Poison

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. Other information

Supplier Material Safety Data Sheet.
Reason(s) for Issue: 5 Yearly Revised Primary MSDS. Change in Personal Protection Requirements
Product Name: OXALIC ACID
Substance No: 000030127001 Version: 2

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since RX MARINE INTERNATIONAL cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.
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RX MARINE INTERNATIONAL responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request. Product