

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Oxalic Acid

Recommended Use: Rust remover, calcium deposit remover.

Supplier: Midland Chemicals
ABN: 91 622 018 986

Street Address: 18 Elliott Street
Midvale
Western Australia

Telephone Number: +61 08 9274 1992

Facsimile: +61 08 9250 1710

Emergency Telephone: **1 800 033 111 (ALL HOURS)**

2. HAZARDS IDENTIFICATION

Road and Rail; Non Dangerous Goods according to the criteria of the Australian Dangerous Goods Code (ADG Code).

Hazard Classification

Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS).

Hazard Categories

Acute Toxicity (Oral) - Category 4
Acute Toxicity (Dermal) - Category 4
Serious Eye Damage/Irritation - Category 1

Pictograms



Signal Word

Danger

Hazard Statements

H302 Harmful if Swallowed
H312 Harmful in contact with skin.
H318 Causes serious eye damage

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Precautionary Statement

Prevention

P270 Do not eat, drink or smoke when using this product

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P312 Call a POISON CENTER or doctor/physician if you feel unwell

P330 Rinse mouth.

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P363 Wash contaminated clothing before reuse

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.

Disposal

P501 Dispose of contents/container in accordance with local / regional / national / international regulations.

Poisons Schedule: 6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Oxalic Acid Dihydrate	6153-56-6	<=100%

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.

Skin Contact:

If spilt on skin or hair, remove all contaminated clothing including foot wear. Carefully brush away product. Wash affected areas thoroughly with running water and a mild soap. Seek medical attention if effects persist.

Eye Contact:

Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give 1-3 cups of water or milk to drink. Never give anything by mouth to an unconscious person. If vomiting occurs give further water. Contact a doctor or the Poisons Information Centre Immediately. Get medical attention.

Medical attention and special treatment:

Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.

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5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Combustible material; May burn but does not ignite readily
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	Fire or heat will produce irritating, toxic and/or corrosive gases, including Carbon monoxide, Carbon dioxide, Formic acid.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No self-ignition below 400 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Collect material (sweep or vacuum up) and place into suitable containers for later disposal (see SECTION 13). Avoid dispersal of dust in the air (i.e. clearing dusty surfaces with compressed air). Non-sparking tools should be used.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	Wash away remainder with plenty of water
Environmental Precautionary Measures	Prevent entry into drains and waterways
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

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7. HANDLING AND STORAGE

This material must be stored, maintained and used in accordance with the relevant regulations.

Conditions for safe storage:

Store in a cool dry, dry, well ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep receptacles tightly closed. Store at room temperature. Keep separated from strong bases, oxidising materials, food and feed and silver. This product is not classified dangerous for transport according to the Australian Code for the Transport of Dangerous Goods By Road and Rail. Store in original packaging as approved by manufacturer.

Precautions for safe handling:

Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

No specific exposure standards are available for this product. For OXALIC ACID (CAS No. 144-62-7): Safe Work Australia Exposure Standard: TWA = 1 mg/m³; STEL = 2 mg/m³.

New Zealand WES: TWA = 1 mg/m³; STEL = 2 mg/m³.

-OSHA PEL: TWA = 1 mg/m³. - Immediately dangerous to life or health (IDLH) concentration: 500 mg/m³.

Note: the exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5day working week.

These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentration of chemicals. They are not a measure of relative toxicity

Engineering controls:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the containment at its source, preventing dispersion of it into the general work area.

Personal Protective Equipment:

Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended filter type: A/P (organic vapour + particulate). Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Tight fitting goggles with side shields, or wide vision full goggles. Hand protection: Wear protective gloves. Recommended: Nitrile, neoprene, natural rubber, polyvinyl. Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Standard work clothes, long pants, long sleeves, coveralls.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid crystals

Colour: colourless/white

Odour: Odourless

Solubility: 108g/L in water (25°C)

Specific Gravity: 0.813 (EU A.3 method)

Relative Vapour Density (air=1): N/A

Vapour Pressure (20 °C): 0.0312 Pa (@ 25 °C)

Flash Point (°C): No data available

Flammability Limits (%): No data available

Auto Ignition Temperature (°C): No self ignition below 400°C

Boiling Point/Melting Point (°C): >160°C

pH: 0.7 at 50g/L

Potential for Dust Explosion: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Properties That May Initiate or

Contribute to Fire Intensity: Combustible material; May burn but does not ignite readily.

Reactions That Release Gases

or Vapours : Fire or heat will produce irritating, toxic and/or corrosive gases, including Carbon monoxide, Carbon dioxide, Formic acid.

10. STABILITY AND REACTIVITY

General Information: The substance in solution is a medium-strong acid. Reacts violently with oxidants causing fire and explosion hazard. Reacts with silver compounds, forming explosive silver oxalate. Attacks some forms of plastic.

Chemical stability: Product is stable under normal conditions of use, storage and temperature.

Conditions to avoid: Avoid generating dust. Avoid exposure to air and moisture. Keep away from heat and sources of ignition.

Incompatible materials: Incompatible/reactive with alkalis, alkaline solutions, ammonia, acid chlorides, halogenates, oxidising agents, metals (Silver), Ammonia, halogens. Reacts violently with oxidants causing fire and explosion hazard. Reacts with Silver compounds, forming explosive products

Hazardous decomposition products: Hazardous decomposition products may include carbon monoxide, carbon dioxide, and formic Acid.

Hazardous reactions: On contact with hot surfaces or flames, this substance decomposes forming formic acid and carbon monoxide. The solution in water is a medium to strong acid. Reacts violently with strong oxidants, causing fire explosion hazard. Reacts with some silver compounds to form explosive silver oxalate. Attacks some forms of plastic.

Hazardous Polymerisation Hazardous polymerisation will not occur.

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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:

General Information:	Acute toxicity: Harmful if swallowed and in contact with skin. Corrosive on ingestion; May cause effects on Calcium balance. Signs of toxicity include nausea and vomiting, headaches, abdominal pain, diarrhoea, bloody stool, numbness and tingling of fingers and toes, muscular irritability, tetany, convulsions, shock, cardiac irregularities and circulatory collapse [NICNAS].
Ingestion:	Harmful if swallowed.
Eye contact:	Eye damage/irritation: Causes serious eye damage. Irreversible effects on the eye (Rabbit) [OECD TG 405].
Skin contact:	Skin corrosion/irritation: Not irritating to skin. No skin irritation (Rabbit) [OECD TG 404].
Respiratory/skin sensitisation:	Respiratory/skin sensitisation: Oxalic acid is not a skin sensitiser [OECD Guideline 429].
Germ cell mutagenicity:	Not considered to be genotoxic [NICNAS].
Carcinogenicity:	No evidence of carcinogenicity [NICNAS].
Reproductive toxicity:	Does not show specific reproductive or developmental toxicity [NICNAS].
STOT (single exposure):	Corrosion and irritant effects of the mouth and digestive tract, skin, eyes and respiratory tract have been reported following exposure to either the solid or concentrated solutions of oxalic acid [NICNAS].
STOT (repeated exposure):	May cause harmful cumulative effects (reduced thyroid function, renal toxicity, kidney damage/stone formation) following repeated oral exposure.
Aspiration toxicity:	No information available.
Long Term Effects:	No information available for the product.

Acute

Ingestion Acute toxicity (Oral):

- LD50, Rat: >375 mg/kg bw. [Supplier's SDS].

Other Acute toxicity (Dermal):

- LD50, Rabbit: >20,000 mg/kg bw. [Supplier's SDS].

Carcinogen Category: None

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12. ECOLOGICAL INFORMATION

Ecotoxicity Keep out of waterways and drains.
Aquatic toxicity: - LC50, Fish (Golden orfe): 160 mg/L (48 h). - EC50, Crustacea (Daphnia magna): 137 mg/L (48 h).

Persistence and Degradability
Oxalic acid is readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of in accordance with all local, state and federal regulations.
All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

14. TRANSPORT INFORMATION

Road and Rail Transport

classified as Non Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON DANGEROUS GOODS.

UN No: N/A

Class-Primary: N/A

Packing Group: III

Proper Shipping Name: Oxalic Acid Dihydrate

Hazchem Code: N/A

Marine Transport

classified as Non- Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; Non DANGEROUS GOODS.

UN No: N/A

Class-Primary: N/A

Packing Group: III

Proper Shipping Name: Oxalic Acid Dihydrate

Hazchem Code: N/A

Air Transport

classified as Non-Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: N/A

Class-Primary: N/A

Packing Group: III

Proper Shipping Name: Oxalic Acid Dihydrate

Hazchem Code: N/A

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15. REGULATORY INFORMATION

Classification: Hazardous according to criteria of Safe work Australia; HAZARDOUS SUBSTANCE

Globally Harmonised System

Hazard Classification

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Hazard Categories

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Poisons Schedule: 6

Packaging group number: III

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16. OTHER INFORMATION

This material safety data sheet has been prepared by Midland Chemicals

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. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Midland Chemicals control. The end user is obliged to conform to relevant government regulations and/or patent laws applicable in their respective States of Countries.