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Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE SUPPLIER

1.1 Product identifiers

Product name : OXALIC ACID DIHYDRATE

1.2 Other means of identification

Ethanedioic Acid, dihydrate.

1.3 Recommended use of the product and restrictions on use

Laboratory chemicals, Manufacture of substances

1.4 Details of supplier of the safety data sheet

Company	: AGent Sales & Services Pty Ltd
Street address	: 38 May Holman Drive, Bassendean, Western Australia 6054
Telephone	: (+61 8) 6270 4500 / 1300 833 844
Fax	: (+61 8) 6270 4544

1.5 Emergency telephone number

Telephone : 1800 995 539

2. HAZARDS IDENTIFICATION

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.

2.1 GHS Classification

Acute toxicity, oral (Category 4)
Acute toxicity, dermal (Category 4)
Serious Eye Damage / Irritation (Category 1)

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word DANGER

Hazard statement(s)

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

Precautionary statement(s)

Prevention

P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves / protective clothing / eye protection / face protection.

Response

P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P330	Rinse mouth.

P302 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P363	Wash contaminated clothing before re-use.
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. Immediatelycall a POISON CENTRE or doctor.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.

Disposal

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

Other hazards

None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Classification	Concentration (%)
Oxalic Acid Dihydrate	6153-56-6	Acute Tox. 4; 1; H302; H312, H318	≤ 100

For the full text of the H-Statements mentioned in this section, see Section 16

4. FIRST AID MEASURES

4.1 Description of First Aid measures

General advice

Contact the Poisons Information Centre (Phone: Australia 131 126; New Zealand 0800 764 766) or consult a doctor/physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim from exposure to fresh air and keep at rest in a position comfortable for breathing. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.

In case of skin contact

Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at least 15 minutes. Wash with plenty of soap and water. Get medical advice / attention. Wash contaminated clothing and shoes before reuse.

In case of eye contact

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

If swallowed

Rinse mouth with water. Give plenty of water to drink provided victim is conscious. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a Poison Centre or doctor/physician for advice.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2.2 and/or Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.4 First Aid facilities

Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Dry chemical, carbon dioxide, foam or water spray for extinction. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the chemical

Combustible material; May burn but does not ignite readily. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Fire & heat will produce irritating, toxic and/or corrosive gases, including carbon monoxide, carbon. dioxide

5.3 Special protective equipment and precautions for fire fighters
Fire fighters to wear self-contained breathing apparatus and chemical splash suit, if risk of exposure to products of decomposition. Do not allow fire-fighting water to reach waterways, drains or sewers. Store fire-fighting water for treatment.

5.4 Hazchem code
None allocated

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid inhalation of dust. Avoid substance contact. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. If contamination of sewers or waterways has occurred, advise local emergency services. Observe all local and national regulations.

6.3 Methods and materials for containment and cleaning up
Collect material (sweep or vacuum) and arrange disposal without creating dust. Non-sparking tools should be used. Place in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Avoid exposure to air and moisture (hygroscopic). Keep away from heat and sources of ignition - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters
No specific exposure standards are available for this product. For Oxalic acid (CAS No. 144-62-7):

- Safe Work Australia (SWA) Exposure Standard: TWA = 1 mg/m^3; STEL = 2 mg/m^3.
- New Zealand Workplace Exposure Standard (WES): TWA = 1 mg/m^3; STEL = 2 mg/m^3.

- NIOSH REL: TWA = 1 mg/m^3; ST = 2 mg/m^3.

- OSHA PEL: TWA = 1 mg/m^3.

- Immediately dangerous to life or health (IDLH) concentration: 500 mg/m^3.

Biological Limits

None allocated for this product.

8.2 Exposure controls

Appropriate 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 contaminant at its source, preventing dispersion of it into the general work area.

Personal protective equipment (PPE)
The selection of PPE is dependent 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.

Eye/face protection
Wear appropriate eye protection to prevent eye contact. Recommended: face shield & safety glasses (AS1336/1337).

Skin protection
Wear protective gloves. Recommended: Impervious gloves, e.g. Nitrile, neoprene, natural rubber, polyvinyl.

Wear appropriate personal protective clothing to prevent skin contact. Recommended: Standard work clothes, long pants, long sleeves, coveralls, safety shoes.

Respiratory protection
Where risk assessment shows inhalation risk exists, wear an approved P1 or P2 particulate filter respirator. Recommended: Organic vapour/particulate (filter type A/P) respirator. See Australian Standards (AS/NZS 1715 & 1716). Use dust mask as a minimum.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form : Solid Colour : Uncoloured crystals or white powder
Odour:	Odourless
Odour Threshold:	No data available
pH:	approx. 0.7 @ 50g/L
Melting Point (ºC):	> 160°C (Sublimes)
Boiling Point/Range (ºC):	> 160°C (Sublimes)
Decomposition Temperature:	> 160°C
Evaporation Rate:	No data available
Flash Point:	No data available
Flammability Limits:	No data available
Density:	0.813 EU A.3 method
Vapour Density (air=1):	No data available
Vapour Pressure:	0.0312 Pa @ 25°C
% Volatiles:	No data available
Solubility in water:	108 g/L @ 25°C

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

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

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur. Risk of explosion with chlorates, sodium hypochlorite, strong oxidising agents, silver & salts of oxyhalogenic acids. Exothermic reaction with bases, ammonia & mercury.

10.4 Conditions to avoid
Avoid moisture.

10.5 Incompatible materials
Incompatible/reactive with alkalis, alkaline solutions, ammonia, acid chlorides, halogenates, oxidising agents, metals.

10.6 Hazardous decomposition products
Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD_{50} Oral (rat): 375 mg/kg
LD_{50} Dermal (rabbit): > 20,000 mg/kg

Skin corrosion / irritation
Skin: Rabbit
Result: No skin irritation (OECD Test Guideline 404)

Serious eye damage / eye irritation
Eyes: Rabbit
Result: Irrevisible effects on the eye (OECD Test Guideline 405)

Respiratory or skin sensitisation
Local lymph node assay (LLNA): Mouse
Result: Negative (OECD Test Guideline 429)

Germ cell mutagenicity
Result: Not mutagenic in Ames Test (OECD Test Guideline 471)

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductivity toxicity
Does not show specific reproductive or developmental toxicity [NICNAS].

Specific target organ toxicity – 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].

Specific target organ toxicity – repeated exposure

May cause harmful cumulative effects (reduced thyroid function, renal toxicity, kidney damage/ stone formation) following repeated oral exposure.

Aspiration hazard
No data available

Health Effects
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)

11.2 Information on possible routes of exposure

The substance can be absorbed into the body by ingestion, inhalation, eye contact and skin contact.

11.3 Additional Information
RTECS: RO2450000

12. ECOGICAL INFORMATION

12.1 Ecotoxicity
Avoid contaminating waterways.

Toxicity to fish:
LC_{50} Leuciscus idus (Golden orfe): 160 mg/L - 48 h

Toxicity to daphnia & other aquatic invertebrates:
EC_{50} Daphnia magna (Water flea): 162.2 mg/L - 48 h

12.2 Persistence and degradability
Biodegradable.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available

12.5 Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods and containers

Ensure waste disposal conforms to relevant local, state and federal authority waste disposal regulations. Dispose of contaminated packaging as for unused product.

14. TRANSPORT INFORMATION

Classified as **NON-DANGEROUS GOODS** by the criteria of the ADG Code for transport by road or rail.
Classified as **NON-DANGEROUS GOODS** by the criteria of the IMDG Code for transport by sea.
Classified as **NON-DANGEROUS GOODS** by the criteria of the IATA Code for transport by air.

14.1	**UN number**	None allocated
14.2	**Proper shipping name**	OXALIC ACID DIHYDRATE
14.3	**Transport hazard class**	None allocated
14.4	**Packing group**	None allocated
14.5	**Environmental hazards**	No
14.6	**Special precautions for users**	None allocated
14.7	**Hazchem code**	None allocated
14.8	**Dangerous goods initial emergency response guide (SAA/SNZ HB76:2010)**	None allocated

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Schedule 6

Carcinogen classification under WHS Regulations 2011, Schedule 10
Not listed

Notification status
AICS On the inventory or in compliance with the inventory.

SECTION 16 OTHER INFORMATION

Key / legend to abbreviations and acronyms used in the MSDS

ADG	Australian Dangerous Goods
ASCC	Australian Safety and Compensation Council
DEC	Department of Environment and Conservation
GHS	Globally Harmonised System of Classification & Labelling of Chemicals
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
NICNAS	National Industrial Chemicals Notification and Assessment Scheme
NOHSC	National Occupational Health and Safety Commission
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
RTECS	Registry of Toxic Effects of Chemical Substances.
SWA	Safe Work Australia
Acute Tox	Acute toxicity
H302	Harmful if swallowed
H312	Harmful in contact with skin
H318	Causes serious eye damage
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline

Full text of H-Statements referred to under sections 2 and 3.
H319 Causes serious eye irritation.

Literature references
“Workplace Exposure Standards for Airborne Contaminants, December 2011” by SWA Work Health and Safety Regulations 2011

“Registry of Toxic Effects of Chemical Substances”. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinatti, 2012.

Reason(s) for Issue:
Update Contact Details

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