Infosafe No™	1CH4U	Issue Date : March 2015	RE-ISSUED by CHEMSUPP

Product Name : **OXALIC ACID Dihydrate**

Classified as hazardous

1. Identification

GHS Product Identifier	OXALIC ACID Dihydrate
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001
Recommended use of the chemical and restrictions on use	Bleaching textiles, flameproofing, rust removal, printing, dyeing, metal and equipment cleaning, anti-corrosion coating, chemical intermediate, catalyst, ceramics, photography, rubber, purifying agent, automobile radiator cleanser, leather tanning, stripping agent for permanent-press resins, rare-earth processing and laboratory reagent.

Other Names

Name	Product Code
OXALIC ACID Dihydrate LR	OL007
OXALIC ACID Dihydrate AR	OA007
Ethanedionic acid, Ethanedioic acid, Dicarboxylic acid	

Other Information

EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Eye Damage/Irritation: Category 1 Acute Toxicity - Dermal: Category 4 Acute Toxicity - Oral: Category 4
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed. H312 Harmful in contact with skin. H318 Causes serious eye damage.
Pictogram (s)	Corrosion, Exclamation mark

Precautionary statement – Prevention	P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement – Response	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P330 Rinse mouth. P363 Wash contaminated clothing before reuse.

3. Composition/information on ingredients

Chemical Characterization	Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase

Classified as hazardous

	Oxalic Acid Dihydrate	6153-56-6	100 %	Xn	R21/22

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion DO NOT INDUCE VOMITING. Wash out mouth with water. Seek immediate medical attention.

Skin Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek immediate medical advice.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Consult Poisons Information Centre.

Other Information If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 13 1126 from anywhere in Australia.

5. Fire-fighting measures

Hazards from Combustion Products Carbon monoxide, carbon dioxide and formic acid.

Specific Methods Small fire: Use dry chemical, CO_2, water spray.
Large fire: Use dry chemical, CO_2, water spray or foam - Do not use water jets!
If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.

Specific hazards arising from the chemical May burn but do not ignite readily.

Hazchem Code 2X

Precautions in connection with Fire Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effect for these materials.

6. Accidental release measures

Personal Precautions Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Environmental Precautions Prevent from entering into drains, ditches, rivers or the sea.

7. Handling and storage

Precautions for Safe Handling Avoid generation or accumulation of dusts. Wash hands and face thoroughly after working with material. Work under hood.

Conditions for safe storage, including any incompatabilities Store in a cool,dry place. Store in well ventilated area. Store away from sources of heat or ignition. Store away from oxidizing agents. Keep containers closed at all times.

Corrosiveness Dry oxalic acid is not corrosive to metals; oxalic acid in solution is corrosive to metals.

Storage Regulations Refer Australian Standard AS 4452:1997 'The storage and handling of toxic substances'.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Oxalic Acid Dihydrate	2	-	1	-	

Appropriate engineering controls In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. Recommendation: Extraction hood.

Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Recommendation: Goggles or face-shield.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: nitrile, butyl rubber, neoprene or PVC) are suitable. PVA gloves are not suitable for handling oxalic acid or its solutions.
Personal Protective Equipment	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	Transparent, colourless crystals.
Odour	Odourless.
Melting Point	101.5 °C
Boiling Point	149-160 °C
Solubility in Water	Soluble (102 g/L @ 20 °C)
Solubility in Organic Solvents	Soluble in alcohol, ether and glycerol. Practically insoluble in benzene, chloroform and petroleum ether.
Specific Gravity	1.65 (@ 18.5°C/4°C)
pH	pH ~1 (100g/l H2O)
Vapour Pressure	<0.001 mm Hg @ 20 °C
Partition Coefficient: n-octanol/water	Log P (o/w): -0.81
Flammability	Combustible.
Molecular Weight	126.07
Other Information	ACIDITY: Strong acid; pK1 = 1.27, pK2 = 4.28.

10. Stability and reactivity

Chemical Stability	Normally stable. If heated to melting point, sublimation and decomposition occurs.
Conditions to Avoid	Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Alkalis, ammonia, salts of oxyhalogenic acids, oxidizing agent, hypochlorates, furfuyl alcohol, silver compounds, metals and water/heat.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide and formic acid.
Possibility of hazardous reactions	In contact with bases, vigorous reaction may occur yielding heat and pressure. In contact with oxidizing agents, violent reaction or explosion may occur. In contact with iron and iron compounds, may react rapidly to form ferric oxalate. In contact with alkali metals, may react violently and produce flammable hydrogen gas. In contact with silver, may form explosive silver oxalate. In contact with acid chlorides, may react vigorously producing toxic fumes.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (female rat): 375 mg/kg.
Ingestion	Irritation of mucous membranes in the mouth, pharynx, oesophagus, and gastrointestinal tract. Rapid absorption. After absorption: nausea, vomiting, disturbed electrolyte balance, agitation, spasms, cardiovscular failure, collapse. Estimated fatal dose is 5 to 15 grams. May cause renal damage, due to bloody urine.
Inhalation	Irritation of the mucous membrances of the nose, throat and respiratory tract, coughing and dyspnoea.
Skin	Harmful in contact with skin. Irritant and caustic effects, tissue damage. Danger of skin absorption. Solutions of 5-10% acid are irritating to the skin after prolonged exposure and can cause corrosive injury. Excessive contact may produce a delayed localized pain, discolouration of the skin with fingernails becoming brittle and blue-coloured, ulcers and gangrene.
Eye	Severe eye irritant. May cause redness, pain and damage to the cornea. If damage is restricted to the outer layer of the eye, recovery may occur within a few days. Prolonged contact with oxalic acid solutions can produce irreversible eye damage.
Reproductive Toxicity	Evidence of reproductive effects.
Chronic Effects	Long-term exposure to oxalic acid solutions, by ingestion, skin absorption and inhalation, is linked to stone formation (insoluble crystals of calcium oxalate salt or calculi) in the kidney and urinary tract. Painful abdominal spasms during the passing of the stone and painful and difficult urination may occur.
Mutagenicity	No evidence of mutagenic properties.

12. Ecological information

Persistence and degradability	Biodegradation: 40% / 5 d. Biodegradable.
Mobility	Water soluble, may spread in water systems and soil.
Environmental Fate	Behaviour in environmental compartments: Distribution: log P(o/w): -0.81 (water-free substance).
Bioaccumulative Potential	No bioaccumulation is to be expected (log P(o/w < 1).
Information on Ecological Effects	Highly toxic to aquatic life.
Other Precautions	Solutions with low pH should be neutralized prior to discharge to sewer.
Acute Toxicity - Fish	LC50 (L idus): 160 mg/l / 48 h
Acute Toxicity - Daphnia	EC50 (Daphnia magna): 137 mg/l/48 h.
Acute Toxicity - Other Organisms	COD: 0.18 g/g; TOD: 0.18 g/g; BOD5: 0.16 g/g. Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information	Class 8 Corrosives shall not be loaded in the same vehicle with: - Class 1 Explosives - Class 4. 3 Dangerous when wet substances - Class 5. 1 Oxidizing agents - Class 5. 2 Organic peroxides
U.N. Number	3261
UN proper shipping name	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Transport hazard class(es)	8
Hazchem Code	2X
Packaging Method	3.8.8
Packing Group	III
IERG Number	36

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	S6

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 4', Commonwealth of Australia, June 2013. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Substances Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	$C_2H_2O_4.2H_2O$

...End Of MSDS...