

Infosafe No™ 1CH45 Issue Date : August 2022 RE-ISSUED by CHEMSUPP

Product Name **MALEIC ACID LR**

Classified as hazardous

Section 1 - Identification

Product Identifier MALEIC ACID LR

Company Product Codes / Numbers / Unique Identifiers ML044

Company Name CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)

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Recommended use of the chemical and restrictions on use Organic synthesis (malic, succinic, aspartic, tartaric, propionic, lactic, malonic and acrylic acids), dyeing and finishing of cotton, wool and silk, artificial resins, preservative for oils and fats and preparation of maleate salts of antihistamines and similar drugs.

Other Names

<u>Name</u>	<u>Product Code</u>
MALEIC ACID	
cis-Butenedioic acid	
Maleinic acid	
Toxic acid	

Other Information

ChemSupply Australia 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 ChemSupply Australia 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 ChemSupply Australia 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.

Section 2 - Hazard(s) Identification

GHS Classification of the Substance/Mixture Eye Damage/Irritation: Category 1
Acute Toxicity - Oral: Category 4
Skin Corrosion/Irritation: Category 2
Specific target organ toxicity - Single Exposure Category 3 (respiratory tract irritation)
Sensitization - Skin: Category 1
Acute Toxicity - Dermal: Category 4

Signal Word DANGER

Hazard Statement (s) H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Pictogram (s) Corrosion, Exclamation mark



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Precautionary Statement – Prevention	P261 Avoid breathing dust. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. 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. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P362 Take off contaminated clothing and wash before reuse. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. 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.
Precautionary Statement – Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
Precautionary Statement – Disposal	P501 Dispose of contents/container according to local, state and federal regulations.

Section 3 - Composition and Information on Ingredients

Ingredients	Name	CAS	Proportion
	Maleic acid	110-16-7	100 %

Section 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	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Remove contaminated clothing and wash affected skin with soap and water. If rapid recovery does not occur, obtain medical attention
Eye	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 drench facilities in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

Section 5 - Firefighting Measures

Specific Methods	Small fire: Use dry chemical, CO2, water spray or foam. Large fire: Use water spray, fog or foam. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
Specific Hazards Arising from the Chemical	May burn but do not ignite readily. Runoff may pollute waterways. Fire may produce irritating, poisonous and/or corrosive fumes. Containers may explode when heated. Dust potential: This material, like most materials in powder form, is capable of creating a dust explosion.
Decomposition Temperature	At temperatures slightly higher than its melting point, it is converted partly to fumaric acid (mp 287 °C).
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

Section 6 - Accidental Release Measures

Personal Precautions	Avoid substance contact. Avoid generation of dusts: do not inhale dusts.
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Personal Protection	Ensure supply of fresh air in enclosed rooms. Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

Section 7 - Handling and Storage

Precautions for Safe Handling	Avoid substance contact and generation and inhalation of dust. Avoid generation or accumulation of dusts.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed and dry, away from direct sunlight. Store at room temperature (15 - 25 °C).

Section 8 - Exposure Controls and Personal Protection

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts when limits have not otherwise been established.
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.
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 and Face 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.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Nitrile rubber gloves
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. Recommendation: Rubber boots.
Body Protection	Flame retardant antistatic protective clothing. 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.

Section 9 - Physical and Chemical Properties

Form	Solid
Appearance	Colourless to white powder.
Odour	Faint acidulous odour.
Melting Point	137 - 140°C
Decomposition Temperature	At temperatures slightly higher than its melting point, it is converted partly to fumaric acid (mp 287 °C).
Solubility in Water	788 g/L @ 25 °C
Solubility in Organic Solvents	Freely soluble in alcohol. Soluble in glacial acetic acid and acetone. Slightly soluble in ether. Practically insoluble in benzene.

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Specific Gravity	1.59
pH	1.3 (100 g/l, H ₂ O)
Vapour Pressure	30 hPa at 20°C
Relative Vapour Density (Air=1)	4.0
Flash Point	>100 °C
Flammability	Combustible.
Explosion Limit - Lower	2.7%
Molecular Weight	116.07
Other Information	Repulsive astringent taste.

Section 10 - Stability and Reactivity

Chemical Stability	Stable under ordinary conditions of use and storage.
Incompatible Materials	Oxidizing agents, reducing agents, bases.
Hazardous Decomposition Products	Carbon dioxide, carbon monoxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 1090 mg/kg.
Acute Toxicity - Dermal	LD50 (rabbit): 1560 mg/kg.
Acute Toxicity - Inhalation	LC50 (rat): >720 mg/m ³ /1 h.
Ingestion	Harmful if swallowed. Symptoms may include irritation of the soft mucous tissues of the mouth, coughing, dyspnoea and gastrointestinal disturbances.
Inhalation	Irritant to the upper respiratory tract and mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Can cause lung irritation, chest pain and oedema which may be fatal.
Skin	Irritating to skin. Harmful by prolonged skin contact.
Eye	Causes serious eye damage.
Chronic Effects	Chronic exposure by skin contact or inhalation may cause irritation of the skin or mucous tissues, possible loss of appetite, nausea, vomiting, abdominal pain, rapid respiration, toxic psychosis and even death.

Section 12 - Ecological Information

Ecotoxicity	Toxic for aquatic organisms.
Persistence and Degradability	Biodegradation: 92%/20d. BOD 77% from TOD/5d. Readily biodegradable. Further ecologic data: COD 96% from TOD; TOD: 0.83 g/g.
Bioaccumulative Potential	Behaviour in environmental compartments: Distribution: log P(o/w): -0.48 (experimental). No bioaccumulation is to be expected (log P(o/w) <1). Bioconcentration factor: 10 - 14.
Acute Toxicity - Fish	P. promelas LC50: 5 mg/l/96 h. Leuciscus idus LC50: 106 mg/l. Lepomis macrochirus (Bluegill) LCo: 300 mg/l/96 h.

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Acute Toxicity - Daphnia Daphnia magna EC50: 316.2 mg/l/48 h.

Acute Toxicity - Algae Algae IC10: 125 mg/l/4 h.

Acute Toxicity - Bacteria Ps. putida EC10: 1190 mg/l/18 h.

Section 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.

Section 14 - Transport Information

Transport Information Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Section 15 - Regulatory Information

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

Poisons Schedule Not Scheduled

Section 16 - Any Other Relevant Information

Literature References 'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & Structural Formula HOOCCH:CHCOOH

...End Of MSDS...

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