

Infosafe No™ 1CH3I	Issue Date : January 2022	RE-ISSUED by CHEMSUPP
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Product Name **ASCORBIC ACID**

Not classified as hazardous

Section 1 - Identification

Product Identifier	ASCORBIC ACID	
Company Name	CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)	
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia	
Telephone/Fax Number	Tel: (08) 8440-2000	
Emergency Phone Number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)	
E-mail Address	www.chemsupply.com.au	
Recommended use of the chemical and restrictions on use	Nutrition, colour fixing, flavouring and preservative in meats and other foods, oxidant in bread doughs, abscission of citrus fruit in harvesting, reducing agent in analytical chemistry and laboratory reagent.	
Other Names	<u>Name</u>	<u>Product Code</u>
	ASCORBIC ACID	AF022
	L-Ascorbic acid	
	Vitamin C	
	ASCORBIC ACID AR	AA022
	ASCORBIC ACID LR	AL022
	ASCORBIC ACID BP	AP022

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	Classified as non-Hazardous according to the 7th Edition Globally Harmonised System of classification and labelling of Chemicals (GHS7) including Work, Health and Safety regulations, Australia. Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).
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Section 3 - Composition and Information on Ingredients

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	L-Ascorbic acid.	50-81-7	100 %

Section 4 - First Aid Measures

Inhalation	Remove victim to fresh air. Seek medical advice if effects persist. If breathing has stopped, apply artificial respiration.
Ingestion	Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Seek medical attention in severe cases, or if large amounts ingested. NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or is convulsing. Do not induce vomiting.
Skin	Wash with plenty of soap and water. If irritation occurs seek medical advice. Remove contaminated clothing Wash clothing before reuse. Seek medical attention.
Eye	Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist. Remove contact lenses.

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First Aid Facilities	Maintain eyewash fountain and drench facilities in work area.
Advice to Doctor	Treat symptomatically. Adverse effects on colour vision. Ascorbic acid should be given with care to patients with hyperoxaluria.
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

Hazards from Combustion Products	Acrid smoke and irritating fumes, carbon monoxide and carbon dioxide.
Specific Methods	Small fire: Use dry chemical, CO ₂ , 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.
Decomposition Temperature	ca. 183 °C; 190 - 192 °C.
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

Section 6 - Accidental Release Measures

Spills & Disposal	Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 15m. Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Do not breathe dust. Do not breathe fumes, vapour, gas. Avoid inhalation, contact with skin, eyes and clothing.

Section 7 - Handling and Storage

Precautions for Safe Handling	Avoid ingestion and inhalation of vapours, or dusts. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. Keep container tightly closed. Use with adequate ventilation. If ingested, seek medical advice immediately and show the container or the label. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Light sensitive. Protect against physical damage and light. Keep away from heat and all sources of ignition. Ground all equipment containing material. Keep away from incompatibles such as oxidizing agents and strong bases. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Conditions for safe storage, including any incompatibilities	Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances. Separated from strong oxidants, strong bases. Solutions of ascorbic acid are rapidly oxidized in air and in alkaline media; the drug should be protected from air and light. Store in light-resistant containers. Store away from direct sunlight. Store protected from moisture. Store under an inert atmosphere. Protect against physical damage. Isolate from any source of heat or ignition. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Corrosiveness	Attacks aluminium, copper, copper alloys, iron and zinc.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).
Unsuitable Materials	Aluminium, copper, copper alloys, iron and zinc.

Section 8 - Exposure Controls and Personal Protection

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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: Plastic or rubber gloves.
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.

Section 9 - Physical and Chemical Properties

Form	Solid
Appearance	White to a very pale yellow crystalline solid, or colourless crystals.
Odour	Odourless.
Melting Point	ca. 183 °C; 190 - 192 °C (decomposes).
Decomposition Temperature	ca. 183 °C; 190 - 192 °C.
Solubility in Water	Soluble (1g/3mL at 20 °C).
Solubility in Organic Solvents	Slightly soluble in alcohol, glycerol and propylene glycol. Insoluble in ether, chloroform, benzene, petroleum ether, oils and fats.
Specific Gravity	1.65 - 1.70
Solubility in Fat	Insoluble.
pH	2.1 - 2.6 (5% aqueous solution)
Vapour Pressure	7.9179 Pa @ 192 °C
Volatile Component	0 %vol @ 21 °C
Partition Coefficient: n-octanol/water (log value)	log P (o/w): -2.15
Flash Point	99 °C
Flammability	Combustible.
Auto-ignition Temperature	640 °C
Flammable Limits - Lower	10% by Volume (g.cu. ft.)
Flammable Limits - Upper	20% by Volume (g.cu. ft.)

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Explosion Properties May form an explosive organic dust cloud with air.
Molecular Weight 176.13
Oxidising Properties The substance is a strong reducing agent and reacts with oxidants.
Other Information Taste: Pleasant, sharp acidic taste.

Section 10 - Stability and Reactivity

Chemical Stability Stable at room temperature in closed containers under normal storage and handling conditions. Stable to air when dry; aqueous solutions are rapidly oxidized by air.
Possibility of Hazardous Reactions Reactive with oxidizing agents.
Air and light sensitive.
Aqueous solutions are rapidly oxidized by air, accelerated by alkalies, iron, copper.
Conditions to Avoid Heat, ignition sources, light, air, moisture, dust generation and incompatible materials.
Incompatible Materials Strong oxidizing agents, alkalies, aluminium, iron, copper, copper alloys, zinc, metal ions, water, acids, sodium nitrate, alkali hydroxides, sodium salicylate, sodium nitrite, theobromine and methenamine.
Hazardous Decomposition Products Carbon monoxide and carbon dioxide.
Hazardous Polymerization Will not occur.

Section 11 - Toxicological Information

Acute Toxicity - Oral LD50 (rat): 11900 mg/kg;
LD50 (mouse): 3367 mg/kg.
Ingestion Ingestion of small amounts during normal industrial handling is a low hazard. Ingestion of large amounts may cause gastrointestinal irritation, gastrointestinal disturbances (nausea, vomiting and diarrhoea), hypermotility, acidification of the urine which may cause precipitation of cystine and oxalate stones in the urinary tract and may cause renal failure coordination, somnolence, eyes (lacrimation), blood (anaemia), a disruption of psychological functioning resulting in decreased reaction times and psychomotor coordination. Increases iron absorption and, thus, large doses may be dangerous in persons with haemochromatosis, thalassaemia, or sideroblastic anaemia. Persons with erythrocyte/G6PD deficiency may develop mild haemolysis. High doses taken during pregnancy may cause scurvy in infants when born.
Inhalation Irritates the respiratory tract. May cause coughing and a sore throat.
Skin May cause mild to moderate irritation and redness. When in solution forms a strong acid which may be irritating to skin.
Skin Corrosion/Irritation Skin irritation test (rabbit): No irritation.
Eye May cause mild to moderate irritation, redness and pain. When in solution forms a strong acid which may be irritating to eyes.
Serious Eye Damage/Irritation Eye irritation test (rabbit): Slight irritation.
Carcinogenicity Not listed in the IARC Monographs.
Chronic Effects Chronic ingestion of ascorbic acid can change the pH of the saliva so that calcium is lost from tooth enamel leading to dental enamel erosion. Prolonged or repeated ingestion may affect the blood/bone marrow and metabolism. Chronic ingestion of large doses may cause gastrointestinal disturbances including nausea and diarrhoea, urinary effects involving urine acidification, oxalate and uric crystallization in the bladder and kidney, and decreased reaction times and psychomotor coordination.

Section 12 - Ecological Information

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Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
Ecotoxicity	When introduced properly, no impairments in the function of waste-water-treatment plants are to be expected.
Persistence and Degradability	Biologic degradation: Readily biodegradable. BOD 48 % of ThOD /5 d (closed bottle test); BOD 65 % of ThOD /28 d (closed bottle test).
Mobility	Distribution: log P(oct) -2.15.
Bioaccumulative Potential	No bioaccumulation is to be expected (log P(o/w <1)).
Acute Toxicity - Fish	Onchorhynchus mykiss LC50: 1020 mg/l /96 h acid; L.idus LC50: 33000 mg/l /48 h.

Section 13 - Disposal Considerations

Disposal Considerations	Dispose of according to relevant local, state and federal government regulations.
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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.
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Section 15 - Regulatory Information

Poisons Schedule	Not Scheduled
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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'.
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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. ChemSupply Australia Pty Ltd 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.
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Empirical Formula & Structural Formula	C6-H8-O6
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