



Safety Data Sheet

Date of Issue: 01.06.2021

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Product	L-Ascorbic acid AR
Product Code	14201
CAS No.	50-81-7

Recommended use : Laboratory Investigations

2: Hazards identification

2.1 GHS Classification

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards

May form explosible dust-air mixture if dispersed.

3: Composition/information on ingredients

3.1 Substances

Synonyms : Vitamin C
Antiscorbutic factor
L-Threoascorbic acid
Formula : C₆H₈O₆
Molecular weight : 176.12 g/mol
CAS-No. : 50-81-7
EC-No. : 200-066-2

4: First aid measures

4.1 Description of first-aid measures

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (See sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Light sensitive.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

Respiratory Protection

Eye Protection

The use of a face shield, chemical goggles, or safety glasses with side shield protection as appropriate.

Hand protection should comply with AS 2161, Occupational protective gloves Selection, use and maintenance. Recommendation: Plastic or rubber gloves.

Hand 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.

Body Protection

Always wash hands before smoking, eating, or using the toilet. Was contaminated clothing and other protective equipment before storing or re-using.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	Solid
Appearance	White to a very pale yellow crystalline solid, or colourless crystals.
Odour	Odourless.
Decomposition Temperature	ca. 183 °C; 190 - 192 °C.
Melting Point	ca. 183 °C; 190 - 192 °C (decomposes).
Solubility in Water	Soluble (1g/3mL at 20 °C).

	Slightly soluble in alcohol, glycerol, and propylene glycol. Insoluble in ether, chloroform, benzene, petroleum ether, oils, and fats.
Solubility in Organic Solvents	
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 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.)
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.

10: Stability and reactivity

10.1 Reactivity

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

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Aluminum
Copper alloys
Zinc
metal ions
Oxidizing agents
Copper
Acids
bases

10.4 Conditions to avoid

Light.
no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

RTECS: CI7650000

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.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12: Ecological information

12.1 Toxicity

Toxicity to fish

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 1,020 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: acidotoxicity to daphnia and other aquatic

EC50 - Daphnia magna (Water flea) - 360 mg/l - 48 h
Remarks: (External MSDS)

invertebrates

Toxicity to algae IC50 - Desmodesmus subspicatus (green algae) - 1,750 mg/l - 72 h
Remarks: (External MSDS)

Toxicity to bacteria EC50 - Pseudomonas putida - 140 mg/l - 16 h
Remarks: (External MSDS)

12.2 Persistence and degradability

Biodegradability Result: 97 % - Readily eliminated from water
(OECD Test Guideline 302B)

Ratio BOD/ThBOD 65 %

Remarks: Closed Bottle test(own results)

Ratio BOD/ThBOD 48 %

Remarks: Closed Bottle test(own results)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

Discharge into the environment must be avoided.

13: Disposal considerations

Disposal Considerations

Dispose of according to relevant local, state, and federal government regulations.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	-	-	-
14.2	UN Proper Shipping name	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3	Transport Hazard Class	-	-	-
14.4	Packaging group	-	-	-
14.5	Environmental Hazards	No	No	No

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Code: HSR003645

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits

Group Standard 2006HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required, not required

Approved Handler Cert.: not required

Notification status

DSL: All components of this product are on the Canadian DSL

ENCS: On the inventory, or in compliance with the inventory

ISHL: On the inventory, or in compliance with the inventory

KECI: On the inventory, or in compliance with the inventory

NZIoC: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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