

Safety Data Sheet Date of Issue/re-issue: **01.03.2016**

User declaration:- I have read and understood this Safety Data Sheet

Name:-

\_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Name:-

\_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

Company Name



**ECP Limited** ecp

Address:

39 Woodside Ave, Northcote, Auckland , New Zealand

Emergency Tel: NZ 0800154666	Tel +64 9 480 4386	FAX +64 9 480 4385
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Product	L-Ascorbic acid AR			Code	14201
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
50-81-7		na	na	na	

Also known as Vitamin C

**2. Hazard Identification**

Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances

Not classified as dangerous goods

**GHS classification**

None

**3. Composition/information on ingredients**

Chemical Solid

**Characterization**

**Ingredients Name**

L-Ascorbic acid. 100% CAS 50-81-7

**4. First-aid measures**

Remove victim to fresh air. Seek medical advice if effects persist. If breathing has stopped, apply artificial respiration.

**Inhalation**

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.

### **Ingestion**

Wash with plenty of soap and water. If irritation occurs seek medical advice.

Remove contaminated

clothing Wash clothing before reuse. Seek medical attention.

### **Skin**

Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.

### **Eye contact**

Remove contact lenses.

**First Aid Facilities** Maintain eyewash fountain and drench facilities in work area.

Treat symptomatically.

Adverse effects on colour vision. Ascorbic acid should be given with care to patients with hyperoxaluria.

### **Advice to Doctor**

For advice, contact a Poisons Information Centre New Zealand (0800 764 766) or a doctor.

### **Other Information**

#### **5. Fire-fighting measures**

Not classified as hazardous

**Hazards from** Acrid smoke and irritating fumes, carbon monoxide and carbon dioxide.

#### **Combustion**

#### **Products**

Small fire: Use dry chemical, CO<sub>2</sub>, 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 Methods**

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.

#### **Specific hazards arising from the chemical**

**Decomposition** ca. 183 °C; 190 - 192 °C. **Temp.**

**Precautions in** Wear SCBA and structural firefighter's uniform.

#### **connection with Fire**

#### **6. Accidental release measures**

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.

### **Spills & Disposal**

Do not breathe dust. Do not breathe fumes, vapour, gas. Avoid inhalation, contact with skin, eyes and clothing.

### **Personal**

### **Precautions**

### **7. Handling and storage**

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.

### **Precautions for Safe**

### **Handling**

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.

**Conditions for safe storage, including any**

**incompatibilities**

**Corrosiveness** Attacks aluminium, copper, copper alloys, iron and zinc.

**Storage** Store at room temperature (15 to 25 °C recommended).

**Temperatures**

**Unsuitable Materials** Aluminium, copper, copper alloys, iron and zinc.

### **8. Exposure controls/personal protection**

A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established

**Other Exposure**

**Information**

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.

**Appropriate engineering controls**

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

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.

**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. Wash contaminated clothing and other

protective equipment before storing or re-using.

### **Hygiene Measures**

## **9. Physical and chemical properties**

**Form** Solid

**Appearance** White to a very pale yellow crystalline solid, or colourless crystals.

**Odour** Odourless.

**Decomposition** ca. 183 °C; 190 - 192 °C.

**Temperature**

**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:** log P (o/w): -2.15

**n-octanol/water**

**Flash Point** 99 °C

**Flammability** Combustible.

**Auto-Ignition** 640 °C

**Temperature**

**Flammable Limits** - 10% by Volume (g.cu. ft.)

**Lower**

**Flammable Limits** - 20% by Volume (g.cu. ft.)

**Upper**

**Explosion** May form an explosive organic dust cloud with air.

## **Properties**

**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**

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.

### **Chemical Stability**

**Conditions to Avoid** Heat, ignition sources, light, air, moisture, dust generation and 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.

### **Incompatible Materials**

**Hazardous** Carbon monoxide and carbon dioxide.

### **Decomposition Products**

Reactive with oxidizing agents.

Air and light sensitive.

Aqueous solutions are rapidly oxidized by air, accelerated by alkalies, iron, copper.

### **Possibility of**

### **hazardous reactions**

**Hazardous** Will not occur.

### **Polymerization**

### **11. Toxicological Information**

LD50 (rat): 11900 mg/kg;

LD50 (mouse): 3367 mg/kg.

### **Acute Toxicity - Oral**

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.

### **Ingestion**

**Inhalation** Irritates the respiratory tract. May cause coughing and a sore throat. May cause mild to moderate irritation and redness. When in solution forms a strong acid which may be irritating to skin.

### **Skin**

May cause mild to moderate irritation, redness and pain. When in solution forms a strong acid which may be irritating to eyes.

### **Eye**

**Carcinogenicity** Not listed in the IARC Monographs.

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.

### **Chronic Effects**

**Serious eye** Eye irritation test (rabbit): Slight irritation.

### **damage/irritation**

**Skin** Skin irritation test (rabbit): No irritation.

### **corrosion/irritation**

## **12. Ecological information**

No ecological problems are to be expected when the product is handled and used with due care and attention.

### **Ecological Information**

When introduced properly, no impairments in the function of waste-water-treatment plants are to be expected.

### **Ecotoxicity**

Biologic degradation: Readily biodegradable.  
BOD 48 % of ThOD /5 d (closed bottle test);  
BOD 65 % of ThOD /28 d (closed bottle test).

**Persistence and degradability**

**Mobility** Distribution: log P(oct) -2.15.

**Bioaccumulative** No bioaccumulation is to be expected (log P(o/w <1).

**Potential**

Onchorhynchus mykiss LC50: 1020 mg/l /96 h acid;

L.idus LC50: 33000 mg/l /48 h.

**Acute Toxicity - Fish**

**13. Disposal considerations**

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

**Considerations**

**14. Transport information**

**15. Regulatory information**

**Poisons Schedule** Not Scheduled

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16. Disclaimer

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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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