

SAFETY DATA SHEET



according to Regulation (EC) No. 1907/2006

VC Ascorbic Acid regular

5015838

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : VC Ascorbic Acid regular

Substance name : L-Ascorbic acid

CAS-No. : 50-81-7

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the : Additive for animal nutrition to be used in feed, For the Substance/Mixture fortification of foods, Ingredient/additive for dietary

supplements, Ingredient for pharmaceutical products

Remarks : A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 and/or Annex IV or V of REACH regulation (EC) No 1907/2006.

1.3 Details of the supplier of the safety data sheet

Company : Oregon Chem Group Spa
Santa Victoria 0372, Providencia
Santiago, Chile

Telephone : +56226352640

Telefax : +56226352641

E-mail address : info@oregonchem.com

Responsible/issuing person

1.4 Emergency telephone number

+56 2 2635 3800

2. Hazards identification

2.1 Classification of the substance or mixture Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture. **Classification (67/548/EEC, 1999/45/EC)** Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

Risk of dust explosion.

3. Composition/information on ingredients

Synonyms : L-threo-hex-2-enonic acid gamma-lactone
 3-oxo-L-gulofuranolactone
 (R)-5-[(S)-1,2-dihydroxyethyl]-3,4-dihydroxy-5(H)-furan-2-one

Brief description of the product : Substance

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Molecular formula : C6 H8 O6

3.1 Substances

Remarks : No hazardous ingredients

Further ingredients

Chemical Name	CAS-No. EC-No. Registration number	Classification	GHS Classification	Concentration [%]
ascorbic acid (Vitamin C)	50-81-7 200-066-2			>= 99 - <= 100

4. First aid measures

4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

In case of eye contact : Flush eyes with water as a precaution.

Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.

Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No specific symptoms known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water
Foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : None known.

5.3 Advice for firefighters

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Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Consider dust explosion hazard.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.
Avoid dust formation.

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Protect from humidity.
: Keep container tightly closed and dry.

Advice on common storage : No special restrictions on storage with other products.

Storage temperature : < 25 °C

7.3 Specific end use(s)

Specific use(s) : Not applicable

8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

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Personal protective equipment

Respiratory protection	: No personal respiratory protective equipment normally required. In case of high dust concentration use a dust mask applicable to local conditions.
Hand protection	: Glove material: for example nitrile rubber
Eye protection	: Safety glasses
Skin and body protection	: Lightweight protective clothing
Hygiene measures	: General industrial hygiene practice.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: Crystalline powder
Colour	: white - off-white
Odour	: odourless
Odour Threshold	: No information available.
pH	: 2,2 - 2,5 (5%) (as aqueous solution)
Melting point/range	: 190 - 192 °C with decomposition
Boiling point/boiling range	: not determined
Flash point	: Not applicable
Flammability (solid, gas)	: May form combustible dust concentrations in air
Vapour pressure	: < 0,001 hPa (at 25 °C; calculated (citation from literature))
Relative vapour density	: Not applicable
Density	: not determined
Water solubility	: ca. 300 g/l (20 °C)
Solubility in other solvents	: Ethanol: ca.20 g/l Ether: practically insoluble Glycerol: ca.10 g/l
Partition coefficient: n-octanol/water	: log Pow -2,0
Auto-ignition temperature	: No data available
Thermal decomposition	: Decomposes on heating. Potential for exothermic hazard Heating can release hazardous gases.
Explosive properties	: Not explosive
Oxidizing properties	: No data available

9.2 Other information



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Combustibility index for : 2 (23 °C)
deposited dust

: 2 (100 °C)

Dust explosion class : St(H)1 (Milled sample, Median value of the tested sample 0,017 mm, Loss on drying 0,3 %; The value was determined in the modified Hartmann tube.)

Minimum ignition energy : 10 - 30 mJ (Milled sample, Median value of the tested sample 0,017 mm, Loss on drying 0,3 %, EN 13821)
The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE.

dust explosion characteristics : General remark: The indicated
are only valid for this product and are sensitive to the sample's parameters.

Powder volume resistivity : ca. 7E+10 Ohmm (Test performed using a similar product., Median value of the tested sample 0,388 mm, Loss on drying 0,2 %)
The material can accumulate static charge and can therefore cause electrical ignition.

Minimum ignition : 350 °C (Median value of the tested sample 0,388 mm) temperature of a dust/air mix determined in the BAM oven

Molecular weight : 176,13 g/mol

Dissociation constant : pKa 4,17

: pKa 11,57

10. Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Exposure to air.
(as aqueous solution)

Heat.

10.5 Incompatible materials

Oxidizing agents
Bases

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10.6 Hazardous decomposition products

No decomposition if used as directed.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity : LD50 (Rat): 11 290 mg/kg

Acute inhalation toxicity : No data available

Acute dermal toxicity : Acute toxicity estimate : > 5000 mg/kg
(Calculation method)

Skin corrosion/irritation : No skin irritation
(Rabbit, OECD Test Guideline 404, 4 h)

Serious eye damage/eye irritation : No eye irritation
(Rabbit, OECD Test Guideline 405)
: Dust contact with the eyes can lead to mechanical irritation.

Respiratory or skin sensitization : Did not cause sensitization. (Guinea pig, Optimization Test sensitisation (Maurer))

Genotoxicity in vivo : No indication for human genotoxicity known.

Carcinogenicity : (several species)
No indication for carcinogenicity known.

Reproductive toxicity : This information is not available.

Teratogenicity : not teratogenic
not embryotoxic
(several species)

STOT - single exposure : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure : NOAEL (Oral, Rat) : 2000 mg/kg bw/d
Chronic toxicity study (2 years)

Aspiration toxicity : No aspiration toxicity classification

Experience with human : RDA (Recommended Daily Allowance) 60 mg exposure

Experience with human : May be slightly irritating, especially on damp skin.
exposure: Skin contact

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Experience with human : Oral intake up to 9 g ascorbic acid per day does not produce exposure: Ingestion any serious toxic effects. However, diarrhoea can occur even with lower consumption levels.

12. Ecological information

12.1 Toxicity

Toxicity to fish : Oncorhynchus mykiss (rainbow trout)
LC50 (96 h) 1 020 mg/l
(OECD Test Guideline 203)

12.2 Persistence and degradability

Biodegradability : Well inherently biodegradable.
100 % (15 d)
97 %, (5 d)
(OECD Test Guideline 302B)

12.3 Bioaccumulative potential

Bioaccumulation : Bioaccumulation is unlikely. Partition coefficient: n- :
log Pow -2,0
octanol/water

12.4 Mobility in soil

Distribution among : No data available environmental
compartments

12.5 Results of PBT and vPvB assessment

Assessment : The substance does not fulfill the PBT criteria.
: The substance does not fulfill the vPvB criteria.

12.6 Other adverse effects

Additional ecological information : There is no data available for this product.

13. Disposal considerations

13.1 Waste treatment methods

Product : Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1 UN number

ADR

Not dangerous goods

RID

Not dangerous goods

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Not dangerous goods **IMDG**

Not dangerous goods **IATA**

14.2 Proper shipping name

Not dangerous goods **ADR**

Not dangerous goods **RID**

Not dangerous goods **IMDG**

Not dangerous goods **IATA**

14.3 Transport hazard class

Not dangerous goods **ADR**

Not dangerous goods **RID**

Not dangerous goods **IMDG**

Not dangerous goods **IATA**

14.4 Packing group

Not dangerous goods **ADR**

Not dangerous goods **RID**

Not dangerous goods **IMDG**

Not dangerous goods **IATA**

14.5 Environmental hazards

Not dangerous goods **ADR**

Not dangerous goods **RID**

Not dangerous goods **IMDG**

Not dangerous goods **IATA**

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

15. Regulatory information

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

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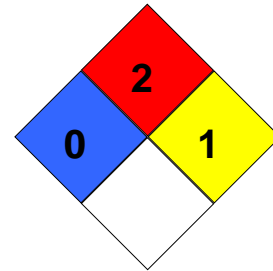
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NFPA Classification

: Health hazard: 0
Fire Hazard: 2
Reactivity Hazard: 1



15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

16. Other information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Abbreviations: 67/548/EEC= Dangerous Substances Directive. 1999/45/EC= Dangerous Preparations Directive. Regulation (EC) No. 1272/2008= Regulation on classification, labelling and packaging of substances and mixtures. DNEL= Derived No-Effect Level. PNEC= Predicted NoEffect Concentration. NFPA= National Fire Protection Association (USA). IATA= International Air Transport Association. IMDG= International Maritime Dangerous Goods. RID= International Rule for Transport of Dangerous Substances by Railway; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. TWA= Time Weighted Average. STEL= Short term exposure limit. WEL = Workplace Exposure Limit.