



The Chemical Company

Safety data sheet

VITAMIN C CRYSTALS

Revision date : 2006/08/07
Version: 1.0

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(30079609/MDS_GEN_US/EN)

1. Substance/preparation and company identification

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP

Molecular formula: C(6)H(8)O(6)
Synonyms: L-ASCORBIC ACID

2. Composition/information on ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
50-81-7	99.0 %	Ascorbic acid

3. Hazard identification

Emergency overview

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.
CAN CAUSE KIDNEY DAMAGE.
CAN CAUSE NERVOUS SYSTEM DAMAGE.

Potential health effects

Primary routes of exposure

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Irritation:

Not irritating to the skin. Not irritating to the eyes.

Sensitization:

Skin sensitizing effects were not observed in animal studies.

Potential environmental effects

Aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

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The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

4. First-aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Seek medical attention if necessary.

If on skin:

Wash thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

If swallowed:

Rinse mouth immediately and then drink plenty of water, seek medical attention.

Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-fighting measures

Flash point:

No data available.

Suitable extinguishing media:

water, carbon dioxide, dry extinguishing media

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

NFPA Hazard codes:

Health : 1 Fire: 1 Reactivity: 0 Special:

6. Accidental release measures

Personal precautions:

Avoid dust formation.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Cleanup:

Dispose of absorbed material in accordance with regulations.

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

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7. Handling and storage

Handling

General advice:

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:

Avoid dust formation. The product is capable of dust explosion. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage

General advice:

Protect contents from the effects of light. Keep container tightly closed in a cool, well-ventilated place.

8. Exposure controls and personal protection

Advice on system design:

Provide local exhaust ventilation to control dust.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. Wash soiled clothing immediately.

9. Physical and chemical properties

Form:	powder, crystalline	
Odour:	odourless	
Colour:	white	
pH value:	2.1 - 2.6	(50 g/l, 25 °C)
melting range:	approx. 190 °C	
Bulk density:	700 - 800 kg/m ³	
Partitioning coefficient n-octanol/water (log Pow):	-1.88	(calculated)
Solubility in water:	> 200 g/l	(20 °C)
Solubility (qualitative):	soluble	
	solvent(s): , Ethanol	

10. Stability and reactivity

Conditions to avoid:

Avoid heat. Avoid light. Avoid moisture. Avoid contact with air.

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Substances to avoid:

No substances known that should be avoided.

Hazardous reactions:

Dust explosion hazard.

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

190 °C

Corrosion to metals:

Corrosive effect on metals.

11. Toxicological information

Acute toxicity

Oral:

LD50/rat: > 5,000 mg/kg

Literature data.

Dermal:

LD50/rat: > 2,000 mg/kg (OECD Guideline 402)

The product has not been tested. The statement has been derived from products of a similar structure and composition.

Skin irritation:

rabbit: non-irritant (OECD Guideline 404)

Eye irritation :

rabbit: non-irritant (OECD Guideline 405)

Sensitization:

Maurer optimisation test/guinea pig: Non-sensitizing.

Literature data.

Chronic toxicity

Genetic toxicity:

Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Reproductive toxicity:

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity/teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological information

Environmental fate and transport

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Biodegradation:

Test method: OECD Guideline 302 B (aerobic), activated sludge
Method of analysis: DOC reduction
Degree of elimination: 90 - 100 % (15 d)
Evaluation: Biodegradable.

Bioaccumulation:

Accumulation in organisms is not to be expected.

Environmental toxicity

Acute and prolonged toxicity to fish:

OECD 203; ISO 7346; 84/449/EEC, C.1 static
golden orfe/LC50 (96 h): > 1,000 - < 2,200 mg/l
The details of the toxic effect relate to the nominal concentration. After neutralization, it is no longer toxic.

Acute toxicity to aquatic invertebrates:

DIN 38412 Part 11 static
Daphnia magna/EC50 (48 h): 360 mg/l
The product will cause changes in the pH value of the test system. The result refers to an neutralized sample.

Toxicity to aquatic plants:

DIN 38412 Part 9 static
green algae/EC50 (72 h): 1,750 mg/l
The product will cause changes in the pH value of the test system. The result refers to an neutralized sample.

Toxicity to microorganisms:

DIN 38412 Part 8 aerobic
bacterium/EC50 (16 h): 140 mg/l
The details of the toxic effect relate to the nominal concentration.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

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Air transport
IATA/CAO

Not classified as a dangerous good under transport regulations

15. Regulatory information

Federal Regulations

Registration status:

TSCA, US

released / listed

OSHA hazard category:
Sensitizer

Chronic target organ effects reported, Acute target organ effects reported,

SARA hazard categories (EPCRA 311/312): Chronic, Acute

16. Other information

HMIS III rating

Health: 1□

Flammability: 1

Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

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