



Safety Data Sheet

Cat. # RC-022

L-Ascorbic Acid (ACS Grade)

Size: 100g





ascorbic acid

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 5/11/2017 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Substance name	: ascorbic acid
Chemical name	: L-Ascorbic Acid (ACS Grade)
EC-No.	: 200-066-2
CAS-No.	: 50-81-7
Product code	: 355A
Type of product	: Pure substance
Formula	: C6H8O6
Synonyms	: 3-ketogulofuranolactone,(L)- / 3-keto-L-gulofuranolactone / 3-ketothoehexuronic acid lactone,(L)- / 3-ketothreoehexuronic acid lactone,(L)- / 3-oxo-gulofuranolactone,(L)- / 3-oxo-L-gulofuranolactone / AA(=ascorbic acid) / adenex / allercorb / antiscorbic vitamin / antiscorbic factor / antiscorbic vitamin / antiscorbic / ARCO-CEE / ascoltin / ASCOR-B.I.D. / ascorbajen / ascorbate / ascorbic acid / ascorbic acid type EC / ascorbic acid U.S.P.-F.C.C. / ascorbic acid, (L)(+) / ascorbicab / ascorbin / ascorbutina / ascorin / ascorreal / ascorvit / C-90(TM)ascorbic acid / C-95(TM)ascorbic acid / C-98(TM)ascorbic acid / cantan / cantaxin / catavin C / CE LENT / cebicure / cebid / cebion / cebione / cecon / CEE-CAPS TD / CEE-VITE / cegiolan / ceglion / celaskon / celin / cemagyl / ce-mi-lin / CEMILL / cenetone / cenolate / cereon / cergona / cescorbat / cetamid / cetane(=ascorbic acid) / cetane-caps TD / CETEBE / cetemican / cevalin / cevatine / cevex / cevi-bid / cevimin / ce-vi-sol / cevital / cevitic acid / cevitamin / cevitin / cevitec / cewin / ciamin / CIPCA / citrisorb / C-level / C-long / coated ascorbic acid type FC / colascor / concemin / C-quin / C-span / C-vimin / darovitam C / davitamon C / dora-C-500 / duosorb / E 300 / FEMA No 2109 / HICEE / hybrin / ido-C / L(+)-ascorbic acid / L-3-ketothreoehexuronic acid lactone / L-3-oxo-gulofuranolactone / laroscorbine / L-ascorbic acid / lemasorb / liqui-cee / L-xyloascorbic acid / L-threoascorbic acid / L-threo-hex-2-enonic acid, gamma-lactone / L-xyloascorbic acid / lyxoascorbic acid,(L)- / meri-C / natrasorb / natrasorb injectable / NSC 33832 / planavit C / proscorbin / redoxon / ribena / roscorbic / scorbacid / scorbu-C / secorbate / testascorbic / testasorbic / vicelat / vicin / vicomin C / viforcit / viscorin / vitace / vitacee / vitacimin / vitacin / vitamin C / vitamisin / vitasorbol / xitix / xyloascorbic acid, (L)-
Product group	: Raw material
BIG No	: 18256
REACH authorisation exemptions	: Exempted from REACH registration

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

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2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ascorbic acid	(CAS-No.) 50-81-7 (EC-No.) 200-066-2	100	Not classified

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Victim is fully conscious: immediately induce vomiting. Give activated charcoal. Consult a doctor/medical service if you feel unwell. Call Poison Information Centre (www.big.be/antigif.htm). Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: AFTER INHALATION OF DUST/MIST: Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/effects after skin contact	: Slight irritation.
Symptoms/effects after eye contact	: Slight irritation.
Symptoms/effects after ingestion	: AFTER INGESTION OF HIGH QUANTITIES: Diarrhoea.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Diarrhoea. Affection of the renal tissue.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.
Unsuitable extinguishing media	: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Heating increases the fire hazard.
Explosion hazard	: DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills.
Methods for cleaning up	: Stop dust cloud by covering with sand/earth. Solid spill: shovel. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Keep container tightly closed.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool.
Storage temperature	: 15 - 30 °C
Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: (strong) bases. alcohols. oxidizing agents. (strong) acids.
Storage area	: Store in a dry area. Store in a dark area. Keep out of direct sunlight. Keep container in a well-ventilated place. Provide the tank with earthing. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: glass. cardboard. synthetic material. MATERIAL TO AVOID: iron. copper.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Materials for protective clothing:

GIVE GOOD RESISTANCE: rubber. synthetic material

Hand protection:

Gloves

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Eye protection:

Safety glasses. In case of dust production: protective goggles

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P1

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid. Crystalline powder. Needles.
Molecular mass	: 176.13 g/mol
Colour	: White to light yellow. On exposure to air: discolours.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 2 - 3 (5 %)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 192 °C
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: > 370 °C
Decomposition temperature	: 192 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 1.65
Density	: 1650 kg/m ³
Solubility	: Soluble in water. Insoluble in oils/fats. Water: 33 g/100ml Ethanol: 3 g/100ml
Log Pow	: -2.15 - -1.64 (Literature study)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

VOC content	: 0 %
Other properties	: Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with (strong) oxidizers. Aqueous solution oxidizes on exposure to air. This reaction is accelerated on exposure to temperature rise, on exposure to light, on exposure to some compounds e.g.: (some) bases and with (some) metals.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	11900 mg/kg (Rat, Oral)
Skin corrosion/irritation	: Not classified pH: 2 - 3 (5 %)
Serious eye damage/irritation	: Not classified pH: 2 - 3 (5 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: On contact with water/moisture : irritant. Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Slightly irritant to skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Not harmful to fishes. Inhibition of activated sludge. pH shift.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

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LC50 fish 1	1000 - 2200 mg/l (96 h, Leuciscus idus, Literature study)
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12.2. Persistence and degradability

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Persistence and degradability	Readily biodegradable in water.
ThOD	0.91 g O ₂ /g substance

12.3. Bioaccumulative potential

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Log Pow	-2.15 - -1.64 (Literature study)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

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Surface tension	0.004 N/m
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Waste treatment methods.
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Product/Packaging disposal recommendations	: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Remove to a household waste incinerator with energy recovery. Dissolve or mix with a combustible solvent.
Additional information	: Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
European List of Waste (LoW) code	: 15 01 02 - plastic packaging 07 01 99 - wastes not otherwise specified

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : Not subject

Transport by sea

Transport regulations (IMDG) : Not subject

Air transport

Transport regulations (IATA) : Not subject

Inland waterway transport

Transport regulations (ADN) : Not subject

Rail transport

Transport regulations (RID) : Not subject

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

ascorbic acid is not on the REACH Candidate List

ascorbic acid is not on the REACH Annex XIV List

ascorbic acid is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

ascorbic acid is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

VOC content : 0 %

15.1.2. National regulations

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.