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A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Cat. # RC-022

L-Ascorbic Acid (ACS Grade)

Size: 100g



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ascorbic acid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/24/2015

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Version: 7.1

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: ascorbic acid
Chemical name	: L-Ascorbic Acid (ACS Grade)
CAS-No.	: 50-81-7
Product code	: 355A
Formula	: C ₆ H ₈ O ₆
Synonyms	: 3-ketogulofuranolactone,(L)- / 3-keto-L-gulofuranolactone / 3-ketothreohexuronic acid lactone,(L)- / 3-ketothreohexuronic acid lactone,(L)- / 3-oxo-gulofuranolactone,(L)- / 3-oxo-L-gulofuranolactone / AA(=ascorbic acid) / adenex / allercorb / antiscorbic vitamin / antiscorbic factor / antiscorbic vitamin / antiscorbic factor / 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 / cevitan / cevitan / cevitan / cewin / ciamin / CIPCA / citriscorb / C-level / C-long / coated ascorbic acid type FC / colascor / concemin / C-quin / C-span / C-vimin / darovitum C / davitamon C / dora-C-500 / duosorb / E 300 / FEMA No 2109 / HICEE / hybrin / ido-C / L(+)-ascorbic acid / L-3-ketothreohexuronic acid lactone / L-3-oxo-gulofuranolactone / laroscorbine / L-ascorbic acid / lemasorb / liqui-cee / L-lyxoascorbic 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 / testasurbic / vicelat / vicin / vicomin C / viforcit / viscorin / vitace / vitacee / vitacimin / vitacin / vitamin C / vitamisin / vitascorbol / xitix / xyloascorbic acid, (L)-
BIG No	: 18256

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - 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: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
ascorbic acid (Main constituent)	3-ketogulofuranolactone,(L)- / 3-keto-L-gulofuranolactone / 3-ketothreohexuronic acid lactone,(L)- / 3-ketothreohexuronic 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 / cevitan / cevitec / cewin / ciamin / CIPCA / citrisorb / C-level / C-long / coated ascorbic acid type FC / colascor / concemin / C-quin / C-span / C-vimin / darovitam C / davitamom C / dora-C-500 / duosorb / E 300 / FEMA No 2109 / HICEE / hybrin / ido-C / L(+)-ascorbic acid / L-3-ketothreohexuronic acid lactone / L-3-oxo-gulofuranolactone / laroscorbine / L-ascorbic acid / lemasorb / liqui-cee / L-lyxoascorbic 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 / testasurbic / vicelat / vicin / vicomin C / viforcit / viscorin / vitace / vitacee / vitacimin / vitacin / vitamin C / vitamisin / vitascorbol / xitix / xyloascorbic acid, (L)-	(CAS-No.) 50-81-7	100	Not classified

Full text of hazard classes and H-statements : see section 16

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.

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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 (acute and delayed)

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.
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. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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. Specific hazards arising from the chemical

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.

5.3. Special protective equipment and precautions for fire-fighters

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.

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.

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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-ignition : 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

GIVE GOOD RESISTANCE: rubber. synthetic material

Hand protection:

Gloves

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Crystalline powder. Needles.

Color : White to light yellow On exposure to air: discolours

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Odor	: Odourless
Odor threshold	: No data available
pH	: 2 - 3 (5 %)
Melting point	: 192 °C
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: 1.65
Specific gravity / density	: 1650 kg/m³
Molecular mass	: 176.13 g/mol
Solubility	: Soluble in water. Insoluble in oils/fats. Water: 33 g/100ml Ethanol: 3 g/100ml
Log Pow	: -2.15 - -1.64 (Literature study)
Auto-ignition temperature	: > 370 °C
Decomposition temperature	: 192 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

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.

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)
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Skin corrosion/irritation	: Not classified pH: 2 - 3 (5 %)
Serious eye damage/irritation	: Not classified pH: 2 - 3 (5 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
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.
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.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or 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.

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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

ascorbic acid (50-81-7)

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

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

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

15.2. International regulations

CANADA

EU-Regulations

National regulations

No additional information available

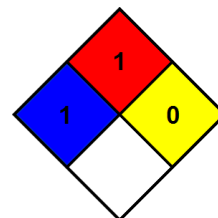
15.3. US State regulations

SECTION 16: Other information

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- NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.
- NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

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.