

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** Ascorbic acid

**Other means of identification**

**Product No.:** 4407, 1852, B581, 0939, 0938, 0937, 0936, 8829, 1914

**Recommended use and restriction on use**

**Recommended use:** For Laboratory, Research or Manufacturing Use.

**Restrictions on use:** Not determined.

**Details of the supplier of the safety data sheet**

	Avantor Performance Materials, LLC 100 Matsonford Rd, Suite 200 Radnor, PA 19087
Telephone:	Customer Service: 855-282-6867
Fax:	
Contact Person:	Product Information Compliance
E-mail:	info@avantormaterials.com

**Emergency telephone number:**

CHEMTREC: 1-800-424-9300 within US and Canada

## 2. Hazard(s) identification

**Hazard Classification**

Not classified

**Label Elements**

<b>Hazard Symbol:</b>	No symbol
<b>Signal Word:</b>	No signal word.
<b>Hazard Statement:</b>	Not applicable
<b>Precautionary Statements</b>	Not applicable

**Other hazards which do not result in GHS classification:**

None.

## 3. Composition/information on ingredients

**Substances**

**Composition Comments:** The components are not hazardous or are below required disclosure limits.

**4. First-aid measures**

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Ingestion:** Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.

**Inhalation:** Call a physician or poison control center immediately. Move to fresh air. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen.

**Skin Contact:** Call a physician or poison control center immediately. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Destroy or thoroughly clean contaminated shoes.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** May cause irritation to skin, eyes, and respiratory tract.

**Hazards:** No information about adverse effects due to exposure.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Symptoms may be delayed. Treat symptomatically.

**5. Fire-fighting measures**

**General Fire Hazards:** The product is non-combustible. No unusual fire or explosion hazards noted.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** No data available.

**Specific hazards arising from the chemical:** None known.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. In case of fire and/or explosion do not breathe fumes. In case of fire and/or explosion do not breathe fumes.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

**Methods and material for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal. Sweep up and place in a clearly labeled container for chemical waste.

**Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

**7. Handling and storage**

**Precautions for safe handling:** Do not get in eyes. Wash hands thoroughly after handling. Do not get in eyes, on skin, on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Do not taste or swallow. Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. See Section 8 of the SDS for Personal Protective Equipment. Do not eat, drink or smoke when using the product. Wash at the end of each work shift and before eating, smoking and using the toilet.

**Conditions for safe storage, including any incompatibilities:** Store locked up.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

None of the components have assigned exposure limits.

**Appropriate Engineering Controls**

No special requirements under ordinary conditions of use and with adequate ventilation.

**Individual protection measures, such as personal protective equipment**

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Eye/face protection:** Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield. Use personal protective equipment as required.

**Skin Protection**

<b>Hand Protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information. Wear suitable protective clothing.
<b>Respiratory Protection:</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
<b>Hygiene measures:</b>	Do not get in eyes. Observe good industrial hygiene practices. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Crystals or powder
<b>Color:</b>	White to slightly yellow
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	3 (5 g/l, 20 °C) 2 (50 g/l, 20 °C)
<b>Melting point/freezing point:</b>	190 °C
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	Not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	0,01 kPa (192,15 °C)
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1,65 g/ml (20 °C)
<b>Relative density:</b>	1,65 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	330 g/l (20 °C)
<b>Solubility (other):</b>	absolute ethanol: 0,02 g/ml propylene glycol: 0,05 g/ml USP glycerol: 0,01 g/ml chloroform: Insoluble ether: Insoluble petroleum ether: Insoluble
<b>Partition coefficient (n-octanol/water):</b>	-1,85
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

### Other information

<b>Molecular weight:</b>	176,12 g/mol (C <sub>6</sub> H <sub>8</sub> O <sub>6</sub> )
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## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	No special precautions.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Alkalies. Iron. Copper.
<b>Hazardous Decomposition Products:</b>	Not determined.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	No adverse effects are expected.
<b>Skin Contact:</b>	No adverse effects are expected.
<b>Eye contact:</b>	None known or expected under normal use.
<b>Ingestion:</b>	No adverse effects due to ingestion are expected.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

<b>Oral</b>	
<b>Product:</b>	LD 50 (Rat): 11.900 mg/kg
<b>Dermal</b>	
<b>Product:</b>	No data available.
<b>Inhalation</b>	
<b>Product:</b>	No data available.

#### Repeated dose toxicity

<b>Product:</b>	None known.
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#### Skin Corrosion/Irritation

<b>Product:</b>	Not known.
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#### Serious Eye Damage/Eye Irritation

<b>Product:</b>	Not known.
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#### Respiratory or Skin Sensitization

<b>Product:</b>	Not a skin nor a respiratory sensitizer.
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#### Carcinogenicity

<b>Product:</b>	This substance has no evidence of carcinogenic properties.
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**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**ACGIH Carcinogen List:**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** None known.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** None known.

**Aspiration Hazard**

**Product:** Not classified

**Other effects:** None known.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**  
Product: Not determined.

**Bioaccumulative potential**  
**Bioconcentration Factor (BCF)**  
Product: Not known.

**Partition Coefficient n-octanol / water (log Kow)**  
Product: Log Kow: -1,85

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

**TDG**  
Not regulated.

**IMDG**  
Not regulated.

**IATA**  
Not regulated.

**Transport in bulk according to Annex II of MARPOL and the IBC Code:** Not applicable

### 15. Regulatory information

#### Canada Federal Regulations

**List of Toxic Substances (CEPA, Schedule 1)**  
Not Regulated

**Export Control List (CEPA 1999, Schedule 3)**  
Not Regulated

#### National Pollutant Release Inventory (NPRI)

**Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements**  
NPRI PT5 Not Regulated

**Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)**  
NPRI Not Regulated

**Greenhouse Gases**  
Not Regulated

**Controlled Drugs and Substances Act**  
CA CDSI Not Regulated

CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

**Precursor Control Regulations**

Not Regulated

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory

**16. Other information, including date of preparation or last revision**

<b>Revision Date:</b>	21.09.2018
<b>Version #:</b>	1.2
<b>Further Information:</b>	No data available.



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