



SAFETY DATA SHEET

ASCORBIC ACID

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: ASCORBIC ACID

PRODUCT NO: RM026

SYNONYMS, TRADE NAMES: L(+)-ASCORBIC ACID

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EMERGENCY CONTACT NUMBER:

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Classification (67/548/EEC OR 1999/45/EC)

Physicochemical None

Label Elements

EC Number 200-066-2

Hazard Statements NC Not Classified

Other Hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Product Name Ascorbic Acid

REACH registration notes	This product is not classified as hazardous, the information in this Datasheet is given for guidance only. Substances contained in this Product that are not classified as hazardous have been/will be registered REACH at the appropriate time.
CAS Number	50-81-7
EC Number	200-066-2
Composition Comments	The data shown are in accordance with the latest EC Directives.

4 FIRST - AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

INHALATION

Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

INGESTION

Rinse mouths thoroughly with water .Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

EYE CONTACT

Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly If symptoms occur after washing.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

INHALATION

No specific symptoms known.

EYE CONTACT

May cause temporary eye irritation.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

NOTES FOR THE DOCTOR

No specific recommendations. If in doubt, get medical attention promptly.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

Use fire- extinguishing media suitable for the surrounding fire.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

SPECIFIC HAZARDS

Oxides of the following substances: Carbon.

HAZARDOUS COMBUSTION PRODUCTS

Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

ADVICE FOR FIREFIGHTERS**PROTECTIVE ACTIONS DURING FIREFIGHTING**

Contain and collect extinguishing water.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**PERSONAL PRECAUTIONS**

Wear protective clothing as described in section 8 of this safety data sheet. Avoid inhalation of dust. Avoid contact with eyes and prolonged skin contact. Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS**ENVIRONMENTAL PRECAUTIONS**

Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory Body.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP**METHODS OF CLEANING UP**

Avoid generation and spreading of dust. Collect and place in suitable waste disposal Containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

REFERENCE TO OTHER SECTIONS**Reference to other sections**

Wear protective clothing as described in section 8 of this safety data sheet. For waste disposal, see section 13.

7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING**USAGE PRECAUTIONS**

Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid handling which leads to dust formation. Take precautionary measures against static discharges.

CONDUSTIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**STOREAGE PRECAUTIONS**

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

INDGREDIENT COMMENTS

No exposure limits known for ingredient(s).

EXPOSURE CONTENT**PROTECTIVE EQUIPMENT****APPROPRIATE ENGINEERING CONTROLS**

Provide Adequate Ventilation

EYE/FACE PROTECTION

The following protection should be worn: Chemical splash goggles.EN 166

HAND PROTECTION

Chemical- resistant, impervious gloves complying with an approved standard should be worn if a risk Assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.EN374

OTHER SKIN AND BODY PROTECTION

Wear suitable protective clothing as protection against splashing or contamination.

HYGIENE MEASURES

Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

RESPIRATORY PROTECTION

No specific recommendations. Protection against nuisance dust must be used when the airborne concentration exceeds 10mg/m³. Wear a respirator fitted with the following cartridge: Particulate filter, type P2. EN 136/140/145/143/149

9 PHYSICAL AND CHEMICAL PROPERTIES**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Granules. Or Crystals.
COLOUR	White.
ODOUR	Odourless.
ODOUR THRESHOLD	No information available
pH	pH (diluted solution): 2.1-2.6 @5%
MELTING POINT	Approx 190 ⁰ C
INITIAL BOILING POINT AND RANGE	No information available
FLASH POINT	No information available
EVAPORATION RATE	No information available
FLAMMABILITY (SOILD, GAS)	No information available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	No information available
OTHER FLAMMABILITY	No information available
VAPOUR PRESSURE	No information available
VAPOUR DENSITY	No information available
RELATIVE DENSITY	0.7 – 1.7

BULK DENSITY	No information available
SOLUBILITY(IES)	Soluble in water
PARTITION COEFFICIENT	:-1.88 (Calculated)
AUTO-IGITION TEMPERATURE	No information available
DECOMPOSITION TEMPERTURE	No information available
VISCOSITY	No information available
EXPLOSIVE PROPERTIES	No information available
EXPLOSIVE UNDER THE INFLUENCE OF A FLAME	No information available
OXIDISING PROPERTIES	No information available
<u>OTHER INFORMATION</u>	
REFRACTIVE INDEX	No information available
PARTICLE SIZE	No information available
MOLECULAR WIEGHT	176.13
VOLATILITY	No information available
SATURATION CONCENTRATION	No information available
CRITICAL TEMPERATURE	No information available
VOLATILE ORGANIC COMPUND	No information available

10 STABILITY AND REACTIVITY

REACTIVITY

REACTIVITY

The Following materials may react with the product: Strong oxidising agents. The following materials may react strongly with the product: Alkaline earth metals. Powdered metal.

CHEMICAL STABILITY

STABILITY

Stable at normal ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS

POSSIBILITY OF HAZARDOUS REACTIONS

Not determined

CONDITIONS TO AVOID

CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time.

INCOMPATIBLE MARERIALS

MATERIALS TO AVOID

Strong oxidising agents, strong alkalis. Alkali metals.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

SKIN CORROSION/IRRITATION

ANIMAL DATA

No information available

SERIOUS EYE DAMAGE/IRRITATION**SERIOUS EYE/IRRITATION**

No information available

RESPIRATORY SENSITISATION**RESPIRATORY SENSITISATION**

No information available

SKIN SENSITISATION**SKIN SENSITISATION**

No information available

GERM CELL MUTAGENICITY**GENOTOXICITY –IN VITRO**

No information available

CARCINOGENICITY**CARCINOGENICITY**

No information available

REPRODUCTIVE TOXICITY**REPRODUCTIVE TOXICITY – FERTILITY**

No information available

SPECIFIC TARGET ORGAN TOXICITY- SINGLE EXPOSURE**STOT-SINGLE EXPOSURE**

No information available

SPECIFIC TARGET ORGAN TOXICITY- REPEATED EXPOSURE**STOT-REPEATED EXPOSURE**

No information available

ASPIRATION HAZARD**ASPIRATION HAZARD**

Not available

INHALATION

Dust in high concentrations may irritate the respiratory system.

INGESTION

No harmful effects expected from quantities likely to be ingested by accident.

SKIN CONTACT

Skin irritation should not occur when used as recommended.

EYE CONTACT

Particles in the eyes may cause irritation and smarting.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

TOXICITY**ACUTE TOXICITY- FISH**LC₅₀ 96 hours :> 1000mg/l, Algae**ACUTE TOXICITY – AQUATIC**EC₅₀ 48 hours: 360 mg/l, Daphnia magna**INVERTEBRATES****PERSISTENCE AND DEGRADABILITY****PERSISTENCE AND DEGRADABILITY**

The product is biodegradable.

BIOACCUMULATIVE POTENTIAL

BIOACCUMULATIVE POTENTIAL The product is not bioaccumulation
PARTITION COEFFICIENT : -1.88(Calculated)

MOBILITY IN SOIL

MOBILITY The product is soluble in water

RESULTS OF PBT AND vPvB ASSESSMENT

RESULTS OF PBT AND vPvB ASSESSMENT

No Information available.

OTHER ADVERSE EFFECTS

OTHER ADVERSE EFFECTS

Not determined.

13 DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

GENERAL INFORMATION

Waste should be treated as controlled waste. Do not puncture or incinerate, even when empty.

DISPOSAL METHODS

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14 TRANSPORT INFORMATION

GENERAL

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

UN NUMBER

Not Applicable.

UN PROPER SHIPPING NAME

Not applicable.

TRANSPORT HAZARD CLASS (ES)

Not Applicable.

PACKING GROUP

Not Applicable.

ENVIRONMENTAL HAZARDS

ENVIRONMENTAL HAZARDOUS SUBSTANCE/MARINE POLLUTANT

No

SPECIAL PRECAUTIONS FOR USE

Not Applicable

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE

TRANSPORT IN BULK ACCORDING TO

Not Applicable

Annex II of MARPOL 73/78

And the IBC Code

15 REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE
EU LEGISLATION

Regulation (EC) No 1907/2006 of the European Parliament and of the council of 18 December 2006 concerning the Regulation, Evaluation, Authorisation and Restriction of chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and council of 16 December 2008 on classification, labelling and packing of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of May 2015

CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out.

16 OTHER INFORMATION

Abbreviations and acronyms

Used in the safety data sheet

ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the international Carriage of Dangerous goods by Road
ADN	European Agreement concerning the international Carriage of Dangerous goods by Inland Waterways
CAS	Chemical Abstracts Service
DNEL	Derived No Effect Level
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
KOW	Octanol- water partition coefficient
LC ₅₀	Lethal Concentration to 50% of a test population
LD ₅₀	Lethal Dose to 50% of a test population (Median Lethal Dose)
PBT	Persistent Bioaccumulative and Toxic substance
PNEC	Predicted No Effect Concentration
REACH	Registration Evaluation Authorisation and Restriction of Chemicals Regulation
(EC) No	1907/2006
RID	European Agreement concerning the International Carriage By Rail
VPvB	Very Persistent and Very Bioaccumulative
IARC	International Agency for Research on Cancer
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships 1973 as modified by the Protocol of 1978
cATpE	Converted Acute Toxicity Point Estimate
BCF	Bioconcentration Factor
BOD	Bioconcentration Oxygen Demand
EC ₅₀	50% of maximal Effective Concentration
LOAEC	Lowest Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Level
LOEC	Lowest Observed Effect Concentration
DMEL	Derived Minimal Effect Level
EL50	Exposure Limit 50
hPa	Hectopascal

LL50	Lethal Loading fifty
OECD	Organisation for Economic Co-operation and Development
POW	Octanol-water partition coefficient
SCBA	Self-contained breathing apparatus
STP	Sewage Treatment Plant
VOC	Volatile Organic Compounds

CLASSIFICATION ABBREVIATIONS AND ACRONYMS

ACUTE TOX =	Acute toxicity
AQUATIC ACUTE =	Hazardous to the aquatic environment (acute)
AQUATIC CHRONIC =	Hazardous to the aquatic environment (chronic)

RISK PHRASES IN FULL

Not classified.

DISCLAIMER

The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this SDS is to the best of JML's knowledge correct at the time of publication. However, no guarantee is given to its accuracy, reliability or completeness and the information may not be valid if the product is used in combination with other materials or process. It is the responsibility of the user to ensure that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulatory requirements.