

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

SORBIC ACID

Version 4.0

Print Date 2020/10/08

Revision date / valid from 2020/10/08

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Trade name : SORBIC ACID
Substance name : Hexa-2,4-dienoic acid
CAS-No. : 110-44-1
EC-No. : 203-768-7

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

Use of the Substance/Mixture : Food additive
Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK Limited
Alpha House, Lawnswood Business Park
GB LS16 6QY Leeds
Telephone : +44 (0) 113 3879 200
Telefax : +44 (0) 113 3879 280
E-mail address : msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours):
+44 (0) 1865 407333 (N.C.E.C. Culham)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Skin irritation	Category 2	---	H315
Eye irritation	Category 2	---	H319

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Specific target organ toxicity - single exposure (Inhalation)	Category 3	---	H335
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For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

Human Health	:	Causes skin irritation. Causes serious eye irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Physical and chemical hazards	:	Dust may form explosive mixture in air.
Potential environmental effects	:	According to available data, this product is not harmful to the environment.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard symbols	:	
Signal word	:	Warning
Hazard statements	:	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
Precautionary statements	:	
Prevention	:	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P261 Avoid breathing dust.
Response	:	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/ attention. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P302 + P352 IF ON SKIN: Wash with plenty of water/soap.

SORBIC ACID**Hazardous components which must be listed on the label:**

- Hexa-2,4-dienoic acid

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

SECTION 3: Composition/information on ingredients**3.1. Substances**

Hazardous components		Amount [%]	Classification (REGULATION (EC) No 1272/2008)	
			Hazard class / Hazard category	Hazard statements
Hexa-2,4-dienoic acid				
CAS-No.	: 110-44-1	<= 100	Skin Irrit.2	H315
EC-No.	: 203-768-7		Eye Irrit.2	H319
			STOT SE3	H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures**

If inhaled	: Move to fresh air. Keep at rest. If symptoms persist, call a physician.
In case of skin contact	: Wash off with soap and water. Remove contaminated clothing and shoes. If symptoms persist, call a physician.
In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If symptoms persist, call a physician.

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

Symptoms	: See Section 11 for more detailed information on health effects and symptoms.
Effects	: See Section 11 for more detailed information on health effects

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and symptoms.

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

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, foam, dry powder or CO₂.
Unsuitable extinguishing media : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Heating or fire can release toxic gas. Dust may form explosive mixture in air.
Hazardous combustion products : Carbon oxides

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment.
Further advice : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions : Wear personal protective equipment. Avoid contact with released product. Do not breathe in vapors. Ensure adequate ventilation. Avoid breathing dust.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Use mechanical handling equipment. Keep in suitable, closed containers for disposal. Avoid dust formation. Do not let product enter drains. After cleaning, flush away traces with water.
Further information : Treat recovered material as described in the section "Disposal considerations".

SORBIC ACID**6.4. Reference to other sections**

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling : Keep container tightly closed. Ensure adequate ventilation. Avoid dust formation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe dust. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Avoid contact with oxidizing agents and strong acids/bases.

Advice on protection against fire and explosion : Dust may form explosive mixture in air. Keep away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge.

Further information on storage conditions : Keep away from sources of ignition - No smoking.

Advice on common storage : Keep away from food, drink and animal feedingstuffs.

Storage temperature : 15 - 25 °C

7.3. Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Other Occupational Exposure Limit Values**

(Additional) Information : Contains no substances with occupational exposure limit values.

SORBIC ACID**8.2. Exposure controls****Appropriate engineering controls**

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment*Respiratory protection*

Advice : Required, if exposure limit is exceeded (e.g. OEL).
Respiratory protection complying with EN 141.

Hand protection

Advice : Protective gloves

Material : natural rubber
Break through time : > 480 min
Glove thickness : 0.11 mm

Advice : Protective gloves complying with EN 374.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Protective gloves should be replaced at first signs of wear.
The following materials are suitable:
PVC
Neoprene
Nitrile rubber

Eye protection

Advice : Safety glasses
Equipment should conform to EN 166

Skin and body protection

Advice : Wear suitable protective clothing.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

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Form	: powder
Colour	: white
Odour	: characteristic
Odour Threshold	: no data available
pH	: 3.3 (1.6 g/l ; 20 °C)
Melting point/range	: 132 - 135 °C
Boiling point	: no data available
Flash point	: > 130 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: 3.87
Relative density	: 1.2 (20 °C)
Density	: ca. 1.2 g/cm ³
Water solubility	: 1.6 g/l (20 °C)
Partition coefficient: n-octanol/water	: log Kow 1.32
Auto-ignition temperature	: no data available
Thermal decomposition	: 190 °C
Viscosity, dynamic	: no data available
Explosivity	: Dust can form an explosive mixture in air.
Oxidizing properties	: no data available

9.2. Other information

Bulk density	: ca. 650 kg/m ³
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SECTION 10: Stability and reactivity**10.1. Reactivity**

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Advice : Stable under recommended storage conditions.

10.2. Chemical stability

Advice : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Dust can form an explosive mixture in air.

10.4. Conditions to avoid

Conditions to avoid : Avoid dust formation. Keep away from direct sunlight. Keep away from heat and sources of ignition. Keep away from flames and sparks. Exposure to air.

Thermal decomposition : 190 °C

10.5. Incompatible materials

Materials to avoid : Oxidizing agents, Bases, Reducing agents

10.6. Hazardous decomposition products

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as: Carbon oxides

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Data for the product****Acute toxicity****Oral**

LD50 Oral : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
7360 mg/kg (Rat)

Dermal

LD50 Dermal : > 2000 mg/kg (Rat)

Irritation**Skin**

Result : Causes skin irritation.
Skin contact may cause irritation. Prolonged and repeated exposure may cause pain and redness.

Eyes

Result : Causes serious eye irritation.
Risk for permanent damage.

SORBIC ACID**Sensitisation**

Result : Please find this information in the listing of the component/components below in this section.

CMR effects**CMR Properties**

Carcinogenicity : Please find this information in the listing of the component/components below in this section.
 Mutagenicity : Please find this information in the listing of the component/components below in this section.
 Reproductive toxicity : Please find this information in the listing of the component/components below in this section.

Specific Target Organ Toxicity**Single exposure**

Remarks : May cause respiratory irritation.

Repeated exposure

Remarks : no data available

Other toxic properties**Aspiration hazard**

No aspiration toxicity classification,

Component: Hexa-2,4-dienoic acid CAS-No. 110-44-1

Acute toxicity**Oral**

LD50 : 10500 mg/kg (Rat, male and female)

Sensitisation

Result : not sensitizing (Maximisation Test; Guinea pig) (Directive 67/548/EEC, Annex V, B.6.)

CMR effects**CMR Properties**

Carcinogenicity : Did not show carcinogenic effects in animal experiments.
 Mutagenicity : In vitro tests did not show mutagenic effects
 Teratogenicity : no data available
 Reproductive toxicity : no data available

SORBIC ACID**SECTION 12: Ecological information****12.1. Toxicity**

Data for the product	
Acute toxicity	
Fish	
LC50	: 1,250 mg/l (Danio rerio (zebra fish); 96 h) (Toxicity to fish; OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	
EC50	: 353 mg/l (Daphnia magna (Water flea); 48 h) (Toxicity to daphnia)
algae	
IC50	: 24.1 mg/l (Desmodesmus subspicatus (green algae); 72 h) (Toxicity to algae)

12.2. Persistence and degradability

Data for the product	
Persistence and degradability	
Biodegradability	
Result	: Readily biodegradable

12.3. Bioaccumulative potential

Data for the product	
Bioaccumulation	
Result	: No information available.

12.4. Mobility in soil

Data for the product	
Mobility	
Result	: No information available.

12.5. Results of PBT and vPvB assessment

SORBIC ACID**Data for the product****Results of PBT and vPvB assessment**

Result : A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

12.6. Other adverse effects**Data for the product****Additional ecological information**

Result : The product is mobile in water environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

- Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
- Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. If recycling is not practicable, dispose of in compliance with local regulations.
- European Waste Catalogue Number : Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Not dangerous goods for ADR, RID, IMDG and IATA.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

SORBIC ACID**14.6. Special precautions for user**

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component:	Hexa-2,4-dienoic acid	CAS-No. 110-44-1
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EU. REACH, Annex XVII, : ; The substance/mixture does not fall under this legislation.
Marketing and Use
Restrictions (Regulation
1907/2006/EC)

EU. Directive : ; The substance/mixture does not fall under this legislation.
2012/18/EU (SEVESO
III) Annex I

15.2. Chemical safety assessment

There is no data available for this product.

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Abbreviations and Acronyms

BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level

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EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
PBT	persistent, bioaccumulative and toxic
REACH Auth. No.:	REACH Authorisation Number
REACH AuthAppC. No.	REACH Authorisation Application Consultation Number
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Key literature references : Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for product classification : The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

Hints for trainings : The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

|| Indicates updated section.

The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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