DAICEL NANNING FOOD INGREDIENTS CO., LTD.

Safety Data Sheet

Sorbic Acid

1. Identification of the substance

Product name : Sorbic Acid

Chemical name : 2,4-Hexadienoic Acid

CAS No : 110-44-1

EC No : 203-768-7

Synonyms : Trans, trans-2,4-hexadienoic acid

Chemical formula : $C_6H_8O_2$

Emergency telephone numbe : China : See Manufacturer Phone Number
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Supplier : Daicel Nanning Food Ingredients Co., Ltd.
29 Jinkai Road, Nanning,Guangxi, P.R.China.
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Product statements : Food Preservative

Specific use(s) : Industrial

2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EU) 1272/2008

CLP-Classification : The product is classified as hazardous in accordance with Regulation (EC) No.1272/2008.

Physical/chemical hazards : Not applicable.

Human health hazards : H319-Irritating to eyes.
H335-May cause respiratory irritation.

For the full text of H-phrases in this section, see section 16.

2.1.2. Classification according to EU Directives 67/548/EEC or 1999/45/EC

Classification : The product is classified as dangerous in accordance with Directive 67/548/EEC.

Xi; R36/37

For the full text of R-phrases in this section, see section 16.

2.2 Label elements

2.2.1. Labelling according to Regulation (EU) 1272/2008

Hazard pictograms:

GHS07

Signal word : Warning

Hazard statements : H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Precautionary statements : Wear protective gloves/protective clothing/eye protection/face protection.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF
IN EYES: Rinse cautiously with water for several minutes.Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.

2.2.2. Labelling according to Directives (67/548 - 1999/45)

Not relevant

2.3. Other hazards

Other hazards : Results of PBT and vPvB assessment
This information is not available

3. Composition / information on ingredients

3.1. Substances

Substance name*	Product identifier	%	Classification according to Directive 67/548/EEC
2,4-Hexadienoic Acid	(CAS No) 110-44-1 EC No) 203-768-7 (EC Index) -	＞99.0	Xi; R36/37

Substance name*	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
2,4-Hexadienoic Acid	(CAS No) 110-44-1 EC No) 203-768-7 (EC Index) -	＞99.0	Irritating to eyes. H319 May cause respiratory irritation. H335

For the full text of R-and H-phrases in this section, see section 16.

3.2. Mixtures

Not applicable

** Occupational exposure limit(s), if available, are listed in section 8*

4.First-aid measures

4.1 First-aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.Get medical attention.

Ingestion : Have conscious person drink several glasses of water or milk. Do not induce vomiting unless directed to do soby medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse.Thoroughly clean shoes before reuse. Get medical attention immediately.

Eye contact : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Thoroughly wash lenses before reuse. Get medical attention immediately.

4.2 Effects and symptoms

Inhalation : Irritating to respiratory system.

Skin contact : May cause skin irritation. Effects of skin contacts may include: Redness, blistering, inflammation, itching.

Eye contact : Irritating to eyes. Eye contact may provoke the following symptoms: Redness, Lacrimation, Pain, Itching.

Aggravating conditions : Repeated or prolonged exposure is not known to aggravate medical condition.

4.3. Indication of immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

5.1 Extinguishing media

Suitable : Small fire: Use dry chemical powder.
Large fire: Use water spray, fog or foam.

Not suitable : Do not use strong water jet.

5.2 Unusual fire/explosion hazards : Material in powder form, capable of creating a dust explosion.
Lower ignition energy ; 15mj.
Lower explosive limit ; 0.020g/l

Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO_2).

5.3 Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

6.1 Personal precautions : Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should beused to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

6.2. Environmental precautions

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

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Keep people away from and upwind of spill/leak. Soak up with inert absorbent material (e.g. sand, silica gel, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. Collect and dispose of waste product at an authorized disposal facility. Hose down gases, fumes and/or dust with water. After cleaning, flush away traces with water. Ensure adequate ventilation. Avoid dust formation. Local authorities should be advised if significant spillages cannot be contained.

7. Handling and storage

7.1. Precautions for safe handling

Handling : Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a firerisk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Do not store near or with any of the incompatible materials listed in section 10.

7.3 Packaging materials

Recommended use : Use original container.

Not suitable : Not available.

8. Exposure controls/personal protection

8.1 Engineering measures : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

8.2 Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

Wash hands after handling the product and before breaks, eating, smoking, using lavatory, and at the end of day.

Recommended monitoring procedures : Not available.

8.3 Personal protective equipment

Respiratory system : Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Skin and body : Chemical resistant protective suit.
Hands : Gloves, chemical resistant.
Eyes : Splash goggles.
Exposure limit(s) : No data available

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Crystals,solid
Color	: White
Odor	: unpleasant odour
Melting point	: 133 to 135°C (271.4 to 275°F)
Density	: no data available
Vapor density	: 3.87 (Air = 1)
Solubility	: Very slightly soluble in cold water.
pH	: no data available
Flash point	: Open cup: 126.7°C (260.1°F).
Flammability (solid, gas)	: Flammable in presence of open flames and sparks.
Autoignition temperature	: 460°C (860°F)
Explosive properties	: Risks of explosion of the product in presence of mechanical impact: no data available. Explosive in presence of open flames and sparks.
Lower explosion limit	: 0.020g/l
Viscosity	: No data available
Initial Boiling Point a Boiling Ranges	228℃（Pyrolysis）

10. Stability and reactivity

10.1. Reactivity

Reactivity : The product is stable under normal conditions

10.2. Chemical stability

Stability : Stable under normal conditions.
Materials to avoid : Reactive with reducing agents.
Slightly reactive to reactive with oxidizing agents, alkalis.

10.3. Possibility of hazardous reactions

Hazardous reactions : None under normal processing.
Hazardous decomposition products : These products are carbon oxides (CO, CO2).

10.4. Conditions to avoid

Conditions to avoid : Avoid dust formation.

11. Toxicological information

11.1. Information on toxicological effects

General Information

Skin irritation : May cause skin irritation. Effects of skin contacts may include: Redness, Blistering, Inflammation, Itching

Eye contact : Irritating to eyes. Eye contact may provoke the following symptoms: Redness , Pain , Itching , Lacrimation .

Inhalation : Irritating to respiratory system.

Acute toxicity : Acute oral toxicity (LD50): 7360 mg/kg [Rat].

11.2 Chronic toxicity

Chronic toxicity : No adverse effects are expected.

carcinogenic effects : No adverse effects are expected.

Mutagenicity : No adverse effects are expected.

Reproductive toxicity : No adverse effects are expected.

12. Ecological information

12.1. Toxicity

Ecotoxicity effects : No data is available on the product itself.

12.2. Persistence and degradability

Persistence and degradability : No data available

12.3. Bioaccumulative potential

Bioaccumulation : No data available

Partition coefficient: n-octano/water No data available

12.4. Mobility in soil

Mobility : slightly soluble (Ethanol)

12.5. Results of PBT and vPvB assessment

PBT/vPvB : No data available

12.6. Other adverse effects

Other information : No data available

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues /unused products Dispose of in accordance with local regulations. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.

Contaminated packaging : Dispose of in accordance with local regulations.

List of suggested waste codes/waste designations in accordance with the EWC : The following Waste Codes are only suggestions: 15 01 10* packaging containing residues of or contaminated by dangerous substances Waste codes should be assigned by the user based on the application for which the product was used.

14. Transport information

14.1. UN number

UN-No. : NA

14.2. UN proper shipping name

Proper Shipping Name : NA

14.3 Transport hazard class(es)

14.3.1. Overland transport

ADR/RID : Not applicable

14.3.2. Inland waterway transport

ADN : No data available

14.3.3. Transport by sea

IMDG : Not applicable

Class or Division

14.3.4. Air transport

ICAO/IATA : Not applicable

Class or Division

14.4. Packing group

Packing group : NA

14.5. Environmental hazards

Environmental hazards : NA

Other information : Not applicable

14.6. Special precautions for user

Special precautions for user : Not applicable

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

No data available

15. Regulatory information

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

15.1.1. EU-Regulations

Restrictions on use : Not applicable

Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No. 1272/2008 : Sorbic Acid-2, 4-Hexadienoic Acid

This product contains an ingredient according to the candidate list of Annex XIV of the REACH Regulation 1907/2006/EC. : None

15.1.2. National regulations

DE: WGK : 1

DE: German storage class (LGK) : LGK 10-Combustible liquids

DE: TA-Luft : Total dust

NL: NeR (Nederlandse emissie Richtli : Total dust

15.2. Chemical Safety Assessment

Chemical Safety Assessment : No data available

16. Other information

Text of R phrases mentioned in Section 3

: R36/37 -Irritating to eyes and respiratory system.

: Xi - Irritant

H-statements components

: H319 -Causes serious eye irritation.
H335 -May cause respiratory irritation.

Abbreviations and acronyms : vPvB = very persistent and very bioaccumulating persistent, bioaccumulating and toxic (PBT).
ADR = Accord europeen relatif au transport international des marchandises, Dangereuses par Route
ADN = Accord europeen relatif au transport international des marchandises, Dangereuses par voie de navigation du Rhin
IMDG = International Maritime Dangerous Goods Code
IATA = International Air Transport Association
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP = Classification, Labelling and Packing Regulation according to 1272/2008/EC
GHS = Globally Harmonized System of Classification and Labelling of Chemicals

History

Revisionnr	:	2
Date of issuing	:	18/11/2013
Supersedes	:	30/01/2011

Notice to reader

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