

SORBIC ACID (FOOD GRADE, E200)

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

SORBIC ACID (FOOD GRADE, E200)
2,4-Hexadienoic acid; (E,E)-Hexa-2,4-dienoic acid; INS/E200
CAS: 110-44-1

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Food, beverage and feed preservative (antimicrobial/antifungal agent, INS 200), cosmetic and personal-care preservative, pharmaceutical excipient, industrial preservative for coatings and adhesives. For industrial/commercial user only.
Uses advised against: All uses not specified in this section or in section 7.3. Use beyond permitted food-additive limits laid down under applicable food safety regulations.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Based on available data, this product does not meet the criteria for classification as hazardous under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Sorbic acid is a well-characterized food additive (E200) with an extensive, favourable public safety record.

Not classified as hazardous under GHS criteria (based on available data).

Note: dust generated during handling of the powder may cause mechanical/transient irritation of the eyes, skin or respiratory tract; this does not constitute a GHS hazard classification – see section 11.

2.2 GHS label elements, including precautionary statements:

GHS: No signal word required

Hazard statements:

None (not classified).

Precautionary statements:

P262: Do not get in eyes, on skin, or on clothing.
P270: Do not eat, drink or smoke when using this product (industrial handling).
P280: Wear protective gloves/eye protection when handling bulk powder.
P304+P340: IF INHALED (dust): Remove person to fresh air and keep comfortable for breathing.
P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards which do not result in classification:

Fine powder may form combustible dust clouds in air under certain processing conditions (see section 10.4). Not a PBT or vPvB substance.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Sorbic Acid, Food Grade
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 110-44-1 EINECS: 203-768-7	Sorbic Acid — Not classified as hazardous	≥99.0% (food grade, typical)

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Not expected to require first aid under normal conditions of use; the measures below are precautionary.

By inhalation:

If dust is inhaled and irritation occurs, remove the person to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice if discomfort persists.

By skin contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water. Seek medical advice if irritation persists.

By eye contact:

Rinse immediately with plenty of water for at least 15 minutes, holding eyelids apart. Remove contact lenses if present and easy to do. If irritation persists, consult a doctor.

By ingestion:

Rinse mouth with water. If large quantities are swallowed and discomfort occurs, seek medical advice. Do not induce vomiting unless directed by medical personnel.

4.2 Most important symptoms/effects, acute and delayed:

May cause transient, mild mechanical irritation of eyes, skin or respiratory tract if contact with dust is prolonged. No delayed effects known. See section 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Not relevant; treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water spray/fog, foam, dry chemical powder, carbon dioxide (CO₂).
Unsuitable: High-pressure water jet (may disperse dust and spread fire).

5.2 Specific hazards arising from the chemical:

Combustible solid. Finely divided powder dispersed in air may form an explosible dust cloud in the presence of an ignition source. Thermal decomposition at high temperature may release carbon monoxide and carbon dioxide.

5.3 Special protective actions for fire-fighters:

Evacuate non-essential personnel. Wear self-contained breathing apparatus and full protective clothing in case of fire. Avoid raising dust. Cool closed containers exposed to fire with water spray.

Additional provisions:

Contain fire-fighting water run-off to prevent discharge to drains/watercourses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Avoid generating dust. Use personal protective equipment described in section 8. Ventilate the area.

For emergency responders:

Wear appropriate PPE as per section 8. No special precautions beyond general good industrial hygiene practice are required.

6.2 Environmental precautions:

Prevent large quantities from entering drains or watercourses. Not expected to pose a significant environmental hazard in small spills; good practice should still be followed.

6.3 Methods and materials for containment and cleaning up:

Sweep up or vacuum (with dust-suppression) and place in a suitable, labelled container for recovery or disposal. Avoid generating airborne dust. Wash spill area with water after bulk removal.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A. General precautions for safe use:

Avoid generating and inhaling dust. Use local exhaust ventilation where dust may be generated. Handle with normal industrial hygiene practice. Keep containers closed when not in use.

B. Technical recommendations for the prevention of fires and explosions:

Control dust accumulation; use appropriately rated electrical equipment where dust clouds may form. Avoid ignition sources near powder-handling operations.

C. Technical recommendations on general occupational hygiene:

Do not eat, drink or smoke while handling. Wash hands after handling. Launder contaminated clothing before re-use.

D. Technical recommendations to prevent environmental risks:

Avoid release to the environment in bulk quantities. Follow local waste-handling rules.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Minimum Temp.	Ambient (store below 25°C recommended)
Maximum Temp.	30°C
Maximum time	24 Months (unopened packaging, typical)

B. General conditions for storage:

Store in tightly closed original containers in a cool, dry, well-ventilated place away from direct sunlight, moisture and strong oxidisers. Protect from heat sources. For additional information see subsection 10.5.

7.3 Specific end use(s):

Used as a food, feed, beverage, cosmetic and industrial preservative in accordance with applicable food-safety and regulatory limits. Except for the instructions already specified, no special recommendation is required.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

No specific occupational exposure limit (OEL) has been established for sorbic acid under the Factories Act, 1948 (as amended). A general particulate (inhalable dust, not otherwise classified) limit is recommended as good practice.

Identification	Occupational Exposure Limit Type	Value
Sorbic Acid CAS: 110-44-1	Particulates (not otherwise classified), TWA (8 hrs) – good-practice guidance	10 mg/m ³

8.2 Appropriate engineering controls:

Use local exhaust ventilation/dust extraction where powder is handled in bulk to keep airborne concentrations below recommended limits.

B. Respiratory protection:

Not normally required with adequate ventilation. For dusty operations, use a particulate filtering half-mask (FFP1/FFP2 type).

C. Specific protection for the hands:

Chemical-resistant gloves (e.g., nitrile) recommended for prolonged or repeated handling.

D. Eye and face protection:

Safety glasses or goggles when handling bulk powder, especially where dust may be generated.

E. Bodily protection:

Standard industrial workwear; antistatic clothing recommended in areas with significant dust handling.

F. Additional emergency measures:

Eyewash station and washing facilities should be available in the work area.

Environmental exposure controls:

Avoid large-scale release to the environment. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Solid (crystalline powder/granules)
Appearance	Free-flowing fine powder or granules

Color	White to pale yellowish-white
Odor	Faint, characteristic
Odour threshold	Not established
Volatility	
Boiling point at atmospheric pressure	228°C (decomposes before boiling)
Vapour pressure at 20°C / 50°C	Negligible
Evaporation rate at 20°C	Not relevant (solid)
Product Description	
Density / Relative density at 20°C	~1.20 g/cm³
Dynamic / Kinematic viscosity	Not relevant (solid)
Concentration	≥99.0% (food grade, typical)
pH	~3–4 (1% aqueous suspension)
Vapour density at 20°C	Not relevant
Partition coefficient n-octanol/water 20°C	Log Pow: ~1.33
Solubility in water at 20°C	Slightly soluble (~0.16 g/100 mL)
Decomposition temperature	>200°C
Melting point/freezing point	134–135°C
Flammability	
Flash Point	Non-applicable (solid)
Flammability (solid, gas)	Combustible solid; not self-igniting under normal conditions
Autoignition temperature	~240°C (dust cloud, typical for organic powders)
Lower / Upper flammability limit	Not established for this product
Particle Characteristics	
Median equivalent diameter	Typical value – refer to current specification sheet

* Not relevant due to the nature of the product, not providing information on the properties of its hazards.

9.2 Other information:

Explosive properties	Not explosive; combustible dust precautions apply (see 10.4)
Oxidising properties	Not oxidising
Corrosive to metals	Not corrosive to metals
Heat of combustion	Typical value – refer to current specification sheet
Surface tension at 20°C	Not relevant (solid)
Refraction index	Not relevant (solid)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Stable under normal conditions of use and storage. Reacts with strong oxidising agents. Slowly oxidises on prolonged exposure to air/light (may darken in colour).

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions are not expected. May undergo slow oxidation on long exposure to air and light.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Avoid prolonged exposure (slow oxidation)	Avoid high temperatures; avoid dust cloud near ignition sources	Avoid prolonged direct exposure	Keep dry; avoid caking/clumping

10.5 Incompatible materials:

Strong Oxidisers	Strong Bases	Water (bulk powder)	Heat Sources	Ignition Sources
Avoid contact	Avoid prolonged contact	Keep powder dry to prevent caking	Keep away	Keep away from powder clouds

10.6 Hazardous decomposition products:

Thermal decomposition at high temperature may release carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Sorbic acid has very low acute toxicity and an extensive history of safe use as a food preservative (E200) within permitted limits.

A. Ingestion (acute effect):

Very low acute oral toxicity. Large doses may cause transient gastrointestinal discomfort.

B. Inhalation (acute effect):

Dust may cause mechanical irritation of the respiratory tract. Not expected to be acutely toxic by inhalation.

C. Contact with skin and eyes (acute effect):

May cause mild, transient irritation on prolonged or repeated contact; not classified as a skin/eye irritant under GHS criteria.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data. IARC: Not listed.

E. Sensitizing effects:

Not generally classified as a skin or respiratory sensitizer based on available data; rare case reports of contact sensitivity exist in the literature at high/repeated dermal exposure.

F. Specific target organ toxicity (STOT) – single exposure:

Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure:

Classification criteria are not met based on available data.

H. Aspiration hazard:

Non-applicable (solid).

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Sorbic Acid CAS: 110-44-1	LD50 oral: 7.36 g/kg	Rat
	LD50 dermal: >2000 mg/kg	Rabbit

SECTION 12: ECOLOGICAL INFORMATION

Not expected to be hazardous to the aquatic environment at use concentrations; readily biodegradable.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: ~77 mg/L (96h)	Non-applicable	Fish
EC50: Typical value – refer to current specification sheet	Non-applicable	Crustacean

12.2 Persistence and degradability:

Readily biodegradable (passes standard OECD ready biodegradability criteria).

12.3 Bioaccumulative potential:

Low bioaccumulation potential (log Pow ~1.33); not expected to bioaccumulate significantly.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Moderate	Low	Moderate mobility	Moderate mobility

12.5 Results of PBT and vPvB assessment:

Does not meet PBT/vPvB criteria.

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Dispose of in accordance with local, state and national regulations. Small quantities may be disposed of as general/organic waste where permitted; larger quantities should be handled via a licensed waste contractor. Empty containers may retain product residue – handle accordingly.

Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product. Where used as a food additive, compliance with FSSAI (Food Safety and Standards Authority of India) permitted limits for INS 200 applies.

Other legislation:

Food Safety and Standards Act, 2006 and Rules/Regulations made thereunder (for food-grade use)
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 (not applicable – product not classified as hazardous)

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

Not classified – no hazard statements apply to this product.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

Published GHS classification references and standard commercial/regulatory SDS databases for Sorbic Acid, CAS 110-44-1.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | BCF: Bioconcentration factor | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Log-POW: Octanol-water partition coefficient | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET