

Safety Data Sheet

Potassium Sorbate

Date of issuing: 06.05.2022

SDS Number: DN00502

Revision Date: 25.04.2022

Date of first issue: 25.04.2022

Version: 1.0

1. SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Potassium Sorbate Granules
Chemical name: Potassium-2, 4-Hexadienoate
CAS No.: 24634-61-5, 590-00-1
EC No.: 246-376-1
Synonyms: Potassium salt of trans, trans-2, 4-hexadienoic acid
Chemical formula: $C_6H_7KO_2$

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

Use of the Substance/Mixture: Food additive

1.3. Details of the supplier of the safety data sheet

Supplier: DAICEL NANNING FOOD INGREDIENTS CO., LTD.
29 Jinkai Road, Nanning, Guangxi, P.R.China.
Tel: +86 771 4832 684 Fax: +86 771 4810 975
Tokyo Head Office Phone: +81-3-6711-8111

Manufacturer: DAICEL NANNING FOOD INGREDIENTS CO., LTD.
29 Jinkai Road, Nanning, Guangxi, P.R.China.
Tel: +86 771 4832 684 Fax: +86 771 4810 975
Tokyo Head Office Phone: +81-3-6711-8111

1.4. Emergency telephone number

China: Tel: +86 771 4515 477 (24h) [Daicel Nanning Food Ingredients Co., Ltd.]
USA: Phone +1-201-461-4466 EXT.104 [Daicel ChemTech, Inc.]

2. SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (according to Regulation (EC) No 1272/2008)
Eye irritation, Category 2
H319: Causes serious eye irritation

2.2. Label elements

Labelling (according to Regulation (EC) No 1272/2008)

Hazard pictograms:



Signal word: Warning

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Hazard statements: H319 Causes serious eye irritation.

Precautionary statements: **Prevention:**

P264 Wash skin thoroughly after handling.

P280 Wear eye protection/ face protection/protective gloves/ protective clothing/ hearing protection.

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.

P302 + P352 If on skin: Wash with plenty of water.

P332 + P313 If skin irritation develops and persists: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Risk of dust explosion.

3. SECTION 3: Composition/information on ingredients

3.1. Substances

Components

Chemical name	Product identifier	Concentration (w/w %)	Classification
Potassium-2, 4-Hexadienoate	CAS No.: 24634-61-5, 590-00-1 EC No.: 246-376-1	≥99 - ≤100	Eye Irrit. Category 2; H319

For explanation of abbreviations see section 16.

3.2. Mixtures

Not applicable

4. SECTION 4: First aid measures

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4.1. Description of first aid measures

General advice:	Move out of dangerous area. Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance.
If inhaled:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
In case of skin contact:	Wash off immediately with plenty of water. Get medical attention immediately if irritation develops and persists.
In case of eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, Get medical attention immediately.
If swallowed:	Do not induce vomiting. Keep respiratory tract clear. Do not give milk or alcoholic beverages. 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 persist.

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

Risks:	Causes serious eye irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

Treatment:	Treat symptomatically
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5. SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Water spray Carbon dioxide (CO ₂) Foam Dry chemical
Unsuitable extinguishing media:	High volume water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting:	Material in powder form, capable of creating a dust explosion.
Hazardous combustion products:	Carbon oxides

5.3. Advice for firefighters

Special protective equipment for fire-fighters:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must

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be disposed of in accordance with local regulations.

6. SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:

- Use personal protective equipment.
- Avoid dust formation.
- Avoid breathing dust.
- Avoid contact with the skin and the eyes.
- Keep away from heat and sources of ignition.
- Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions:

- Should not be released into the environment.
- Do not discharge large quantities of concentrated spills or residues into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up:

- Soak up with inert absorbent material (e.g. sand, sawdust).
- Keep in suitable, closed containers for disposal.
- Dispose of waste product at an authorized disposal facility.

6.4. Reference to other sections

See sections: 7, 8, 11, 12 and 13.

7. SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

- Avoid formation of respirable particles.
- Do not breathe vapours/dust.
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Not to eat, drink and smoke in work areas.
- Dispose of rinse water in accordance with local and national regulations.

Advice on protection against:
fire and explosion

- Avoid dust formation.
- Provide appropriate exhaust Ventilation at places where dust is formed.
- Take measures to prevent the build up of electrostatic charge.
- Keep away from heat and sources of ignition.

Hygiene measures:

- Avoid contact with the skin and the eyes. When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday.

Temperature class: T4

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7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage:	Keep in a dry, cool place. Store locked up. Protect against light.
areas and containers	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Advice on common storage:	Keep away from oxidizing agents.
Further information:	Use original container.
on storage stability	Keep in a dry place. No decomposition if stored and applied as directed.
Storage class (TRGS 510):	11, Combustible Solids

7.3. Specific end use(s)

Specific use(s):	None known.
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8. SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Remarks: This substance is exempt from registration according to Regulation (EC)No. 1907/2006 (REACH).

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Remarks: This substance is exempt from registration according to Regulation (EC)No. 1907/2006 (REACH).

8.2. Exposure controls

Appropriate engineering controls:	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.
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 workday.
Personal protective equipment:	
Eye protection:	Tightly fitting safety goggles. Wear face-shield and protective suit. A safety eye-washer should be readily available.
Hand protection:	Material: Nitrile rubber Break through time: 480 min Glove thickness: 1.5 mm

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Remarks:	Directive: Protective gloves complying with EN 374. Protective index: Class 6 The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection:	Dust impervious protective suit. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection:	Respirator with a dust filter. Equipment should conform to EN 143. Use NIOSH approved respiratory protection.
Filter type:	P2 filter
Protective measures:	Do not get in eyes, on skin. Do not breathe dust.

9. SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Solid, Pellets
Color:	White or yellowish
Odor:	Odourless or slightly odour
Melting point:	270°C
Density:	No data available
Vapor pressure:	0,0000001 hPa (20 °C) Method: OECD Test Guideline 104
Solubility:	Soluble in cold water: 67.6 g/100ml (20 °C) Slightly soluble in ethanol: 0.3 g/100ml (20 °C)
pH:	7 (20 °C) Concentration: 543 g/l
Flash point:	Not applicable.
Autoignition temperature:	178 °C
Explosive properties:	Risks of explosion of the product in presence of mechanical impact: no data available. Risks of explosion of the product in presence of static discharge: no data available.
Viscosity (Viscosity, dynamic):	Not applicable.
Initial Boiling Point and Boiling Ranges:	Not applicable.
Surface tension:	72 mN/m, 1.000 mg/l, OECD Test Guideline 115

9.2. Other information

Oxidizing properties:	Not applicable based on consideration of the structure.
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10. SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity:	No decomposition if stored and applied as directed.
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10.2. Chemical stability

Stability: No decomposition if stored and applied as directed.
Materials to avoid: Reactive to reactive with oxidizing agents, reducing agents.

10.3. Possibility of hazardous reactions

Hazardous reactions: No dangerous reaction known under conditions of normal use.
No decomposition if stored and applied as directed.

10.4. Conditions to avoid

Conditions to avoid: Avoid dust formation.
Do not expose to temperatures above: 210 °C

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, reducing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products are known.
Hazardous combustion products: Carbon oxides

11. SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

Acute oral toxicity: LD50 (Rat): > 10000 mg/kg
Test substance: Sorbic acid
Acute inhalation toxicity: LC50 (Rat): > 5.15 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Acute dermal toxicity: LD50 (Rat): > 2000 mg/kg
Method: OECD Test Guideline 402
Test substance: Sorbic acid

Skin corrosion/irritation

Not classified based on available information.

Remarks: May cause skin irritation in susceptible persons.

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

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Causes serious eye irritation.

Remarks:

May cause skin irritation in susceptible persons.

Species:

Rabbit

Method:

OECD Test Guideline 405

Result:

Eye irritation.

Respiratory or skin sensitisation

Skin sensitisation:

Not classified based on available information.

Respiratory sensitisation:

Not classified based on available information.

Species:

Guinea pig

Method:

Similar to EEC 96/54, B.6

Result:

Does not cause skin sensitisation.

Test substance:

Sorbic acid

Germ cell mutagenicity

Not classified based on available information.

Genotoxicity in vitro:

Test Type: Ames test

Metabolic activation: with and without metabolic activation.

Method: Mutagenicity (Escherichia coli - reverse mutation assay)

Result: negative

Test Type: Chromosome aberration test in vitro

Metabolic activation: without metabolic activation.

Method: Mutagenicity (in vitro mammalian cytogenetic test).

Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo:

Test Type: Micronucleus test

Species: Mouse

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Not classified based on available information.

Species:

Mouse

Application Route:

Oral

Exposure time:

80 weeks

1400 mg/kg bw/day

Result:

No evidence of carcinogenicity in animal studies.

Test substance:

Sorbic acid

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Reproductive toxicity

Not classified based on available information.

Effects on fertility:	Test Type: Two-generation study
	Species: Rat
	Application Route: Oral
	General Toxicity - Parent: NOAEL: 3000 mg/kg body weight
	General Toxicity F1: NOAEL: 1000 mg/kg body weight
	Method: OECD Test Guideline 416
	Result: No toxicity to reproduction
	Remarks: Test substance: Sorbic acid
Effects on foetal development:	Species: Rat
	Application Route: Oral
	Teratogenicity: NOAEL: 340 mg/kg bw/day
	Embryo-foetal toxicity: NOAEL: 340 mg/kg bw/day
	Method: Regulation (EC) No. 440/2008, Annex, B.31
	Result: No developmental or reproductive effects

Repeated dose toxicity

Species:	Rat
NOAEL:	750 mg/kg
Application Route:	Oral
Test substance:	Sorbic acid
Remarks:	No consistent differences between treated and control groups, although there were some statistically significant differences in the high dose males and/or females.

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Assessment:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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Further information

Remarks:	No data available.
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12. SECTION 12: Ecological information

12.1. Toxicity

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Toxicity to fish:

LC50 [*Oncorhynchus mykiss* (rainbow trout)]:
> 1000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:

EC50 [*Daphnia magna* (Water flea)]: 982 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to microorganisms:

EC50: > 100 mg/l

Exposure time: 3 h

Test Type: activated sludge

Test substance: Sorbic acid

Method: OECD Test Guideline 209

12.2. Persistence and degradability

Biodegradability:

Result: Readily biodegradable.

Test substance: Sorbic acid

Method: OECD Test Guideline 301D

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Endocrine disrupting properties

Assessment:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

No data available

13. SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Do not dispose of waste into sewer.

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Do not contaminate ponds, waterways or ditches with chemical or used container.

Dispose of in accordance with local regulations.

Contaminated packaging:

Empty remaining contents. Dispose of as unused product.

Do not re-use empty containers.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. SECTION 14: Transport information

14.1. UN number or ID number

Not regulated as a dangerous good.

14.2. UN proper shipping name

Not regulated as a dangerous good.

14.3. Transport hazard class(es)

Not regulated as a dangerous good.

14.5. Environmental hazards

Not regulated as a dangerous good.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

15. SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market:
and use of certain dangerous substances, preparations and articles
(Annex XVII) Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the:
Council concerning the export and import of dangerous chemicals Not applicable

REACH - Candidate List of Substances of Very High Concern for:
Authorisation (Article 59). Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone:
Not applicable

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REACH - List of substances subject to authorization (Annex XIV): Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable

15.2. Chemical safety assessment

Chemical safety assessment: No data available

16. SECTION 16: Other information

Full text of H-Statements

H319: Causes serious eye irritation.

Full text of other abbreviations

Eye Irrit.: Eye irritation

Abbreviations and acronyms

SDS = Safety Data Sheet;

ISO = International Organisation for Standardization;

CLP = Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008;

GHS = Globally Harmonized System;

GLP = Good Laboratory Practice;

UN = United Nations;

REACH = Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;

PBT = Persistent, Bioaccumulative and Toxic substance;

vPvB = Very Persistent and Very Bioaccumulative

SVHC = Substance of Very High Concern;

NIOSH = National Institute for Occupational Safety and Health.

AND = European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;

ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road;

AICS = Australian Inventory of Chemical Substances;

ASTM = American Society for the Testing of Materials;

bw = body weight;

CMR = Carcinogen, Mutagen or Reproductive Toxicant;

DIN = Standard of the German Institute for Standardisation;

DSL = Domestic Substances List (Canada);

ECHA = European Chemicals Agency;

EC = Number - European Community number;

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ECx = Concentration associated with x% response;

ELx = Loading rate associated with x% response;

EmS = Emergency Schedule;

ENCS = Existing and New Chemical Substances (Japan);

ErCx = Concentration associated with x% growth rate response;

IARC = International Agency for Research on Cancer;

IATA = International Air Transport Association;

IBC = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;

IC50 = Half maximal inhibitory concentration;

ICAO = International Civil Aviation Organization;

IECSC = Inventory of Existing Chemical Substances in China;

IMDG = International Maritime Dangerous Goods;

IMO = International Maritime Organization;

ISHL = Industrial Safety and Health Law (Japan);

KECI = Korea Existing Chemicals Inventory;

LC50 = Lethal Concentration to 50 % of a test population;

LD50 = Lethal Dose to 50% of a test population (Median Lethal Dose);

MARPOL = International Convention for the Prevention of Pollution from Ships;

N.O.S. = Not Otherwise Specified;

NO(A)EC = No Observed (Adverse) Effect Concentration;

NO(A)EL = No Observed (Adverse) Effect Level;

NOELR = No Observable Effect Loading Rate;

NZIoC = New Zealand Inventory of Chemicals;

OECD = Organization for Economic Co-operation and Development;

OPPTS = Office of Chemical Safety and Pollution Prevention;

PICCS = Philippines Inventory of Chemicals and Chemical Substances;

(Q)SAR = (Quantitative) Structure Activity Relationship;

RID = Regulations Concerning the International Carriage of Dangerous Goods by Rail;

SADT = Self-Accelerating Decomposition Temperature;

TRGS = Technical Rule for Hazardous Substances;

TSCA = Toxic Substances Control Act (United States);

Date format

Day-Month-Year

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.