SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 06/21/2008
Date Updated: 02/05/2006
Version 1.70

Section 1 - Product and Company Information

Product Name Sorbic acid, minimum 99.0%
Product Number S1626
Brand Sigma Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832 **Emergency Phone:** 314-776-6555
Fax: 800-325-5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
2,4-HEXADIENOIC ACID	110-44-1	No	203-768-7	

Formula C6H8O2
Synonyms Acetic acid, (2-butenylidene)-, Acetic acid, crotylidene-, Panosorb, Hexadienic acid, Hexadienoic acid, (E,E)-2,4-Hexadienoic acid, 2,4-Hexadienoic acid, (E,E)- (9CI), trans-trans-2,4-Hexadienoic acid, 2E,4E-Hexadienoic acid, Kyselina 1,3-pentadien-1-karboxylova (Czech), Kyselina sorbova (Czech), 1,3-Pentadiene-1-carboxylic acid, 2-Propenylacrylic acid, trans,trans-Sorbic acid, Sorbistat

Section 3 - Hazards Identification

Emergency Overview
Irritant.
Irritating to eyes, respiratory system and skin.

HMIS Rating
Health: 2 Flammability: 1 Reactivity: 0

NFPA Rating
Health: 2 Flammability: 1 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Explosion Data
Dust Potential
This material, like most materials in powder form, is capable of creating a dust explosion.

Flash Point: 260.6 °F 127 °C

Autoignition Temp: N/A

Extinguishing Media
Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal.Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe dust. Avoid contact with eyes, skin, and clothing.Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed. Store at 2-8°C

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance

Physical State	Color	Form
Solid	White	Fine crystals

Molecular Weight	112.13 AMU		
pH	33	20 °C	Concentration: 16 g/l
BP/BP Range	N/A		
MP/MP Range	133 °C		
Freezing Point	N/A		
Vapor Pressure	0.01 mmHg	20 °C	
Vapor Density	N/A		
Saturated Vapor Conc.	N/A		
SG/Density	12 g/cm3	20 °C	
Bulk Density	65 kg/l		
Odor Threshold	N/A		
Volatile%	N/A		
VOC Content	N/A		
Water Content	N/A		
Solvent Content	N/A		
Evaporation Rate	N/A		
Viscosity	N/A		
Partition Coefficient	N/A		
Decomposition Temp.	> 170 °C		
Flash Point °F	260.6 °F		Method: closed cup
Flash Point °C	127 °C		Method: closed cup
Explosion Limits	N/A		
Flammability	N/A		
Autoignition Temp	N/A		

Solubility
Solvent: 0.1 g/ml EtOH, Clear

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Bases, Oxidizing agents, Reducing agents

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
Causes skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
Causes eye irritation.
Inhalation
Material is irritating to mucous membranes and upper respiratory tractMay be harmful if inhaled.
Ingestion
May be harmful if swallowed.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: WG2100000

Toxicity Data

Oral - Rat: 7360 mg/kg (LD50)

Intraperitoneal - Rat: 800 MG/KG (LD50)

Oral - Mouse: 3200 mg/kg (LD50)

Intraperitoneal - Mouse: 2820 MG/KG (LD50)

Subcutaneous - Mouse: 2820 MG/KG (LD50)

Irritation Data

Eyes - Rabbit
Remarks: Moderate irritation effect

Skin - Man: 150 mg 1H
Remarks: Severe irritation effect

Skin - Rabbit: 1 mg
Remarks: Severe irritation effect

Chronic Exposure- Carcinogen

Rat - Subcutaneous: 1040 MG/KG 65W I
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.Tumorigenic:Tumors at site or application.

Chronic Exposure- Mutagen

Species	*Dose*	*Cell Type*	*Mutation test*
Hamster	1050 MG/L	lung	Cytogenetic analysis
Hamster	1050 MG/L	lung	Sister chromatid exchange

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport Non-hazardous for air transport.

Section 15 - Regulatory Information

EU Additional Classification
Symbol of Danger: Xi
Indication of Danger
Irritant.
Risk Statements **R:** 36/37/38
Irritating to eyes, respiratory system and skin.
Safety Statements **S:** 26 36
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice/Wear suitable protective clothing.

US Classification and Label Text
Indication of Danger
Irritant.
Risk Statements
Irritating to eyes, respiratory system and skin.
Safety Statements
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice/Wear suitable protective clothing.

United States Regulatory Information
SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.