



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 09/12/2008
Date Updated: 01/31/2006
Version 1.120

Section 1 - Product and Company Information

Product Name: Benzoic acid, >99.5%, A.C.S. reagent
Product Number: 242381
Brand: Sigma-Aldrich
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Table with 5 columns: Substance Name, CAS #, SARA 313, EC no, Annex I Index Number. Row 1: BENZOIC ACID, 65-85-0, No, 200-618-2.

Formula: C7H6O2
Synonyms: Acide benzoique (French), Acido benzoico (Italian), Benzenecarboxylic acid, Benzeneformic acid, Benzenemethanoic acid, Benzoate, Benzoesaure (German), Carboxybenzene, Dracrylic acid, E 210, HA 1 (acid), Kyselina benzoova (Czech), Phenylcarboxylic acid, Phenylformic acid, Retarder BA, Retardex, Salvo liquid, Salvo powder, TennPlas

Section 3 - Hazards Identification

Emergency Overview
Harmful.
Harmful if swallowed. Irritating to eyes, respiratory system and skin.

HMS 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 skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flash Point: 250 °F 121 °C

Autoignition Temp: 572 °C

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 to be Followed in Case of Leak or Spill
Evacuate area.

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.

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.

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Safety & Environmental Health

General Hygiene Measures

Wash thoroughly after handling.

Exposure Limits

Country	Source	Type	Value
USA	ACGIH	TLV	10 mg/m ³
Remarks	inhalable particulate		
USA	ACGIH	TLV	3 mg/m ³
Remarks	respirable dust in air		
USA	OSHA	PEL	15 mg/m ³
Remarks	total dust		
USA	OSHA	PEL	5 mg/m ³
Remarks	respirable dust		

Section 9 - Physical/Chemical Properties

Appearance	Color	Form
Physical State	White	Fine crystals
Solid		

Molecular Weight 122.12 AMU

Property Value At Temperature or Pressure

pH	N/A	
BP/BP Range	248.9 °C	760 mmHg
MP/MP Range	121 - 125 °C	
Freezing Point	N/A	
Vapor Pressure	10 mmHg	132 °C
Vapor Density	4.21 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.32 g/cm ³	
Bulk Density	N/A	
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.	N/A	
Flash Point °F	250 °F	Method: closed cup
Flash Point °C	121 °C	Method: closed cup

Explosion Limits N/A

Flammability N/A
Autoignition Temp 572 °C

Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity**Stability**

Stable

Stable

Materials to Avoid

Strong oxidizing agents, Strong bases, Strong 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**

May cause skin irritation.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

Causes eye irritation.

Inhalation

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion

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: DG0875000

Toxicity Data

Oral - Man: 500 mg/kg (LDLO)

Oral - Rat: 1700 mg/kg (LD50)

Inhalation - Rat: > 26 mg/m³ (LC50)

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation.

Behavioral: Somnolence (general depressed activity).

Intraperitoneal - Rat: 1600 MG/KG (LD50)

Intravenous - Rat: 1700 MG/KG (LD50)

Oral - Mouse: 1940 mg/kg (LD50)

Remarks: Behavioral: Somnolence (general depressed activity).

Lungs, Thorax, or Respiration: Respiratory depression.

Gastrointestinal: Other changes.

Intraperitoneal - Mouse: 1460 MG/KG (LD50)

Skin - Rabbit: > 10000 mg/kg (LD50)

Irritation Data

Eyes - Rabbit:

Remarks: Mild irritation effect

Skin - Human: 22 mg 3D I
Remarks: Moderate irritation effect

Skin - Rabbit: 500 mg 24H
Remarks: Mild irritation effect

Eyes - Rabbit: 100 mg
Remarks: Severe irritation effect

Chronic Exposure- Mutagen

<u>Species</u>	<u>Dose</u>	<u>Cell Type</u>	<u>Mutation test</u>
Human	5 MMOL/L	lymphocyte	DNA inhibition

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: Environmentally hazardous substances, solid, n.o.s.

UN#: 3077

Class: 9

Packing Group: Packing Group III

Hazard Label: Class 9

PIH: Not PIH

IATA

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

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: Xn

Indication of Danger

Harmful.

Risk Statements R: 22 36

Harmful if swallowed. Irritating to eyes.

Safety Statements S: 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US Classification and Label Text

Indication of Danger

Harmful.

Risk Statements

Harmful if swallowed. 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.

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 contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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