

## MATERIAL SAFETY DATA SHEET

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Version 1.6

## Section 1 - Product and Company Information

Product Name BENZOIC ACID, 99%  
Product Number 109479  
Brand ALDRICH

Company Sigma-Aldrich  
Street Address 3050 Spruce Street  
City, State, Zip, Country SAINT LOUIS MO 63103 US  
Technical Phone: 314 771 5765  
Emergency Phone: 414 273 3850 Ext. 5996  
Fax: 800 325 5052

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BENZOIC ACID	65-85-0	No

Formula C7H6O2  
Synonyms Acide benzoique (French) \* Acido benzoico (Italian) \* Benzenecarboxylic acid \* Benzeneformic acid \* Benzenemethanoic acid \* Benzoate \* Benzoesaure (German) \* Carboxybenzene \* Dracylic acid \* E 210 \* HA 1 (acid) \* Kyselina benzoova (Czech) \* Phenylcarboxylic acid \* Phenylformic acid \* Retarder BA \* Retardex \* Salvo liquid \* Salvo powder \* Tenn-Plas

RTECS Number: DG0875000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful.

Harmful if swallowed. Risk of serious damage to eyes. Irritating to respiratory system and skin. May cause sensitization by inhalation and skin contact.

Sensitizer.

## HMIS RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

## NFPA RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

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

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, do not induce vomiting; call a physician immediately. If ingested- give large amounts of water or milk to dilute acid. Do not induce vomiting.

#### 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.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

249.8 °F    121 °C    Method: closed cup

#### AUTOIGNITION TEMP

572 °C

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: 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.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, 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.

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### Section 7 - Handling and Storage

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#### HANDLING

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

#### STORAGE

Suitable: Keep tightly closed.

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### Section 8 - Exposure Controls / PPE

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ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.  
Hand: Compatible chemical-resistant gloves.  
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
USA	ACGIH	TLV	10 mg/m3
Remarks: inhalable particulate			
USA	ACGIH	TLV	3 mg/m3
Remarks: respirable dust in air			
USA	OSHA.	PEL	15 mg/m3
Remarks: total dust			
USA	OSHA.	PEL	5 mg/m3
Remarks: respirable dust			

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Section 9 - Physical/Chemical Properties

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Appearance	Color: White Form: Fine crystals	
Property	Value	At Temperature or Pressure
Molecular Weight	122.12 AMU	
pH	N/A	
BP/BP Range	248.9 °C	760 mmHg
MP/MP Range	121 °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/cm3	
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	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	249.8 °F 121 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	572 °C	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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Section 10 - Stability and Reactivity

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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

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Section 11 - Toxicological Information

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ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes severe eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

SENSITIZATION

Sensitization: May cause allergic respiratory and skin reactions

SIGNS AND SYMPTOMS OF EXPOSURE

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

TOXICITY DATA

Oral

Rat

1,700 mg/kg

LD50

Oral

Man

500 mg/kg

LDLO

Oral

Rat

1700 mg/kg

LD50

Inhalation

Rat

> 26 mg/m<sup>3</sup>

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

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

Species: Human  
Dose: 5 MMOL/L  
Cell Type: lymphocyte  
Mutation test: DNA inhibition

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#### Section 12 - Ecological Information

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No data available.

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#### Section 13 - Disposal Considerations

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#### 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.

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#### Section 14 - Transport Information

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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.

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Section 15 - Regulatory Information

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EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn  
Indication of Danger: Harmful.  
R: 22 37/38 41 42/43  
Risk Statements: Harmful if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. May cause sensitization by inhalation and skin contact.  
S: 22 26 36/37/39 45  
Safety Statements: Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.  
Risk Statements: Harmful if swallowed. Risk of serious damage to eyes. Irritating to respiratory system and skin. May cause sensitization by inhalation and skin contact.  
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. Do not breathe dust.  
US Statements: Sensitizer.

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

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Section 16 - Other Information

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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. 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. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.