

Safety Data Sheet acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

1 Identification

- **Product identifier**
- **Trade name:** Benzoic Acid
- **Synonym** Benzenecarboxylic Acid; Carboxybenzene; NSC 149
- **CAS Number:**
65-85-0
- **Other means of identification**
- **Article number:** 43179
- **EC number:**
200-618-2
- **Index number:**
607-705-00-8
- **Application of the substance / the mixture**
This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Cayman Chemical Co.
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
USA
- **Information department:** Product safety department
- **Emergency telephone number:**
During normal opening times: +1 (734) 971-3335
US/CANADA: 800-424-9300
Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Specific target organ toxicity (repeated exposure) 1 H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.



GHS05 Corrosion

Eye damage 1

H318 Causes serious eye damage.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 1)



GHS07

Acute toxicity - oral 4

Skin irritation 2

H302 Harmful if swallowed.

H315 Causes skin irritation.

· **Label elements**

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05



GHS07



GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Benzoic acid

· **Hazard statements**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves / eye protection / face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

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

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P314 Get medical advice/attention if you feel unwell.

P330 Rinse mouth.

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

P332+P313 If skin irritation occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Information pertaining to particular dangers for man and environment:**

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 2)

· HMIS-ratings (scale 0 - 4)

HEALTH 3

Health = *3

FIRE 1

Fire = 1

REACTIVITY 0

Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

· Classification according to (d)(1)(ii) of § 1910.1200

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

· Hazards not otherwise classified

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

· Chemical characterization: Substances

· CAS No. Description

65-85-0 Benzoic acid

· Identification number(s)

- **EC number:** 200-618-2

- **Index number:** 607-705-00-8

4 First-aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** Immediately call a doctor.

· Most important symptoms and effects, both acute and delayed

No further relevant information available.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· Special hazards arising from the substance or mixture

67-56-1 During heating or in case of fire poisonous gases are produced.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 3)

- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

13 mg/m³

- **PAC-2:**

140 mg/m³

- **PAC-3:**

830 mg/m³

- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Store in accordance with information listed on the product insert.
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

65-85-0 Benzoic acid

TLV	Long-term value: 0.5 mg/m ³ inh. fraction+vapour, Skin, A5
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- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 5)

-US-

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 4)

- **Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Color:** Not determined.
- **Odor:** Characteristic
- **Structural Formula** C6H5COOH
- **Molecular Weight** 122.12 g/mol
- **Storage Buffer**
- **Odor threshold:** Not determined.
- **Formulation**
- **Melting point/Melting range:** 122 °C (251.6 °F)
- **Boiling point/Boiling range:** 250 °C (482 °F)
- **Flammability:** Product is not flammable.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 5)

· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	>93 °C (>199.4 °F)
· Auto igniting:	570 °C (1,058 °F)
· Decomposition temperature:	Not determined.
· pH-value:	Not applicable.
· Viscosity:	
· Kinematic:	Not applicable.
· SOLUBILITY	DMSO: Soluble: = 10 mg/ml; Ethanol: Soluble: = 10 mg/ml
· Dynamic:	Not applicable.
· Solubility in / Miscibility with	
· Water at 20 °C (68 °F):	2.9 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure at 96 °C (204.8 °F):	1.3 hPa (1 mm Hg)
· Vapor pressure:	
· Density at 20 °C (68 °F):	1.2659 g/cm ³ (10.56394 lbs/gal)
· Relative density	Not determined.
· Bulk density:	500 kg/m ³
· Vapor density	Not applicable.
· Particle characteristics	Not determined.
· Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· VOC content:	0.00 %
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not applicable.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 6)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)		
Oral	LD50	1,700 mg/kg (rat)

65-85-0 Benzoic acid		
Oral	LD50	1,700 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Strong irritant with the danger of severe eye injury.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

- **Interactive effects** No interactive effects between components are known.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

- **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects**

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

US

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 7)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** not regulated
- **UN proper shipping name**
- **DOT, IMDG, IATA** not regulated
- **Transport hazard class(es)**
- **DOT, ADN, IMDG, IATA**
- **Class** not regulated
- **Packing group**
- **DOT, IMDG, IATA** not regulated
- **Environmental hazards:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:**
- **DOT**
- **Hazardous substance:** 5000 lbs, 2270 kg
- **Special precautions for user** Not applicable.
- **UN "Model Regulation":** not regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

ACTIVE

· **Hazardous Air Pollutants**

Substance is not listed.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/11/2025

Revision date 06/11/2025

Trade name: Benzoic Acid

(Contd. from page 8)

- **Chemicals known to cause cancer:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

D

- **TLV (Threshold Limit Value)**

Substance is not listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- **Department issuing SDS:** Environment protection department.

- **Contact:** -

- **Date of previous version** 06/11/2025

- **Date of preparation** 06/11/2025

- **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute toxicity - oral 4: Acute toxicity – Category 4

Skin irritation 2: Skin corrosion/irritation – Category 2

Eye damage 1: Serious eye damage/eye irritation – Category 1

Specific target organ toxicity (repeated exposure) 1: Specific target organ toxicity (repeated exposure) – Category 1

- *** Data compared to the previous version altered.**