

SAFETY DATA SHEET

Creation Date 01-May-2012

Revision Date 17-Jan-2018

Revision Number 5

1. Identification

Product Name Benzoic acid

Cat No. : A63-500; A65-500; A68-30

CAS-No 65-85-0

Synonyms Benzenecarboxylic acid; Benzenemethanoic acid; Phenylcarboxylic acid; Phenylformic acid; Benzeneformic acid; Carboxybenzene

Recommended Use Laboratory chemicals.

Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Skin Corrosion/irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Specific target organ toxicity - (repeated exposure) | Category 1 |
| Target Organs - Lungs. | |
| Combustible dust | Yes |

Label Elements

Signal Word

Danger

Hazard Statements

May form combustible dust concentrations in air
Causes skin irritation
Causes serious eye damage
Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Do not eat, drink or smoke when using this product

Response

Get medical attention/advice if you feel unwell

Skin

IF ON SKIN: Wash with plenty of soap and water
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing and wash before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician

Storage

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|--------------|---------|----------|
| Benzoic acid | 65-85-0 | >95 |

4. First-aid measures

| | |
|--|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention. |
| Inhalation | Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention. |
| Ingestion | Do not induce vomiting. Obtain medical attention. |
| Most important symptoms and effects | Causes eye burns. |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---------------------------------------|--|
| Suitable Extinguishing Media | Water spray. Carbon dioxide (CO ₂). Dry chemical. Chemical foam. |
| Unsuitable Extinguishing Media | No information available |

| | |
|---|--------------------------|
| Flash Point | 121 °C / 249.8 °F |
| Method - | No information available |
| Autoignition Temperature | 570 °C / 1058 °F |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Dust can form an explosive mixture in air. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 3 | 1 | 0 | N/A |

6. Accidental release measures

| | |
|---|---|
| Personal Precautions | Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with the skin and the eyes. |
| Environmental Precautions | See Section 12 for additional ecological information. |
| Methods for Containment and Clean Up | Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. |

7. Handling and storage

| | |
|-----------------|---|
| Handling | Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Avoid dust formation. Do not breathe dust. |
| Storage | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. |

8. Exposure controls / personal protection

| | |
|--------------------------------------|---|
| Exposure Guidelines | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| Engineering Measures | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Personal Protective Equipment | |
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|---|---------------------------------|
| Physical State | Solid |
| Appearance | Off-white |
| Odor | aromatic |
| Odor Threshold | No information available |
| pH | 2.5-3.5 2.9 g/l water |
| Melting Point/Range | 121 - 123 °C / 249.8 - 253.4 °F |
| Boiling Point/Range | 249 °C / 480.2 °F @ 760 mmHg |
| Flash Point | 121 °C / 249.8 °F |
| Evaporation Rate | Not applicable |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | 1.3 hPa @ 96 °C |
| Vapor Density | Not applicable |
| Specific Gravity | No information available |
| Solubility | soluble |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 570 °C / 1058 °F |
| Decomposition Temperature | No information available |
| Viscosity | Not applicable |
| Molecular Formula | C7 H6 O2 |
| Molecular Weight | 122.12 |

10. Stability and reactivity

| | |
|---|--|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Avoid dust formation. |
| Incompatible Materials | Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents, Metals |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | Aqueous solution, May react with metals and lead to the formation of flammable hydrogen gas. |

11. Toxicological information

Acute Toxicity

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------|--|-------------------------------|---|
| Benzoic acid | 1700 mg/kg (Rat) 2565 mg/kg (Rat) | LD50 > 10000 mg/kg (Rabbit) | LC50 > 12.2 mg/L (Rat) 4 h LC50 > 26 mg/m ³ (Rat) 1 h |

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|------------------------|--|
| Irritation | Risk of serious damage to eyes Irritating to skin |
| Sensitization | No information available |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|--------------|---------|------------|------------|------------|------------|------------|
| Benzoic acid | 65-85-0 | Not listed |

| | |
|---|--|
| Mutagenic Effects | Not mutagenic in AMES Test |
| Reproductive Effects | No information available. |
| Developmental Effects | No information available. |
| Teratogenicity | No information available. |
| STOT - single exposure | None known |
| STOT - repeated exposure | Lungs |
| Aspiration hazard | No information available |
| Symptoms / effects, both acute and delayed | No information available |
| Endocrine Disruptor Information | No information available |
| Other Adverse Effects | The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information. |

12. Ecological information

Ecotoxicity

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|--------------|---|---|---|---|
| Benzoic acid | EC50: = 5 mg/L, 3h (Anabaena inaequalis) | LC50: = 180 mg/L, 96h (Gambusia affinis) | EC50 = 16.85 mg/L 30 min EC50 = 16.9 mg/L 15 min | EC50: = 300 mg/L, 24h (Daphnia magna) EC50: = 860 mg/L, 48h Static (Daphnia magna) |

| | |
|--------------------------------------|--|
| Persistence and Degradability | Soluble in water Persistence is unlikely based on information available. |
| Bioaccumulation/ Accumulation | No information available. |
| Mobility | No information available. |

| Component | log Pow |
|--------------|---------|
| Benzoic acid | 1.9 |

13. Disposal considerations

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|-------------------------------|---|
| Waste Disposal Methods | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|---|

14. Transport information

| | |
|-----------------|---------------|
| DOT | Not regulated |
| TDG | Not regulated |
| IATA | Not regulated |
| IMDG/IMO | Not regulated |

15. Regulatory information

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|--------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Benzoic acid | X | X | - | 200-618-2 | - | | X | X | X | X | X |

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Benzoic acid | X | 5000 lb | - | - |

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|--------------|--------------------------|----------------|
| Benzoic acid | 5000 lb | - |

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------|---------------|------------|--------------|----------|--------------|
| Benzoic acid | X | X | X | - | - |

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

| | |
|-------------------------|---|
| Prepared By | Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com |
| Creation Date | 01-May-2012 |
| Revision Date | 17-Jan-2018 |
| Print Date | 17-Jan-2018 |
| Revision Summary | This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). |

Disclaimer

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

End of SDS