

Material Safety Data Sheet

Benzoic acid

ACC# 02720

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzoic acid

Catalog Numbers: AC149130000, AC149130010, AC149135000, AC221800000, AC221800010, AC221802500, AC423470000, AC423470020, AC423470250, AC423475000, A63-500, A65-500, A68-30

Synonyms: Benzenemethanoic acid; Benzenecarboxylic acid; Phenylcarboxylic acid; Phenylformic acid; Carboxybenzene; Benzeneformic acid; Dracylic acid.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
65-85-0	Benzoic acid	>99	200-618-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white crystalline powder.

Warning! Causes eye, skin, and respiratory tract irritation. Harmful if swallowed. May cause sensitization by inhalation and by skin contact.

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes severe eye irritation. Causes redness and pain.

Skin: Causes skin irritation. May be harmful if absorbed through the skin. May cause sensitization by skin contact. May be absorbed through the skin in harmful amounts. Absorption through the skin has produced labored breathing in humans. Benzoic acid can cause redness and swelling with itching (non-immunological contact urticaria or hives) in most people at the site of application. Individuals can react without having been previously exposed to benzoic acid.

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract.

Inhalation: Causes respiratory tract irritation. May be harmful if inhaled. May cause respiratory sensitization. Intermittent breathing of dust over a 4-week period produced interstitial fibrosis in the lungs of rats. Benzoic acid begins to sublime at 100°C.

Chronic: Prolonged or repeated skin contact may cause dermatitis.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: 121 deg C (249.80 deg F)

Autoignition Temperature: 570 deg C (1,058.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Benzoic acid	none listed	none listed	none listed

OSHA Vacated PELs: Benzoic acid: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Appearance: white

Odor: pleasant odor

pH: 2.8 (satd soln)
Vapor Pressure: 0.0012 mm Hg @ 25 deg C
Vapor Density: 4.21 (air=1)
Evaporation Rate: Negligible.
Viscosity: Not available.
Boiling Point: 249.2 deg C @ 760 mmHg
Freezing/Melting Point: 122.4 deg C
Decomposition Temperature: Not available.
Solubility: 3.4 g/l @ 25°C
Specific Gravity/Density: Not available.
Molecular Formula: C7H6O2
Molecular Weight: 122.12

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, dust generation, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, strong reducing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 65-85-0: DG0875000

LD50/LC50:

CAS# 65-85-0:

- Draize test, rabbit, eye: 100 mg Severe;
- Draize test, rabbit, skin: 500 mg/24H Mild;
- Inhalation, rat: LC50 = >26 mg/m³/1H;
- Oral, mouse: LD50 = 1940 mg/kg;
- Oral, rat: LD50 = 1700 mg/kg;
- Skin, rabbit: LD50 = >10 gm/kg;

Human TDLo skin of 6 mg/kg produced dyspnea (difficult or labored breathing) and allergic dermatitis.

Carcinogenicity:

CAS# 65-85-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: Benzoic acid and sodium benzoate have been tested for mutagenicity or

genotoxicity in prokaryotes, eukaryotes, and several mammalian test systems. No positive results have been reported. RTECS data for benzoic acid: Mutations in microorganisms: Escherichia coli = 10 mmol/L. DNA inhibition: Human lymphocyte = 5 mmol/L. EPA GENETOX PROGRAM 1988, Negative: Histidine reversion-Ames test; S cerevisiae-homozygosis.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Mosquito Fish: LC50 = 180 mg/L; 96 Hr; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 = 16.9 mg/L; 96 Hr; Microtox test @ 15°C If released on land, benzoic acid should leach into the ground due to its low soil adsorption and biodegrade (half-life <1 wk). If released in water, benzoic acid should also readily biodegrade (half-life 0.2-3.6 days). Adsorption to sediment and volatilization should not be significant.

Environmental: No information available.

Physical: No information available.

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated	Not Regulated
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 65-85-0 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 65-85-0: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 65-85-0: immediate.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 65-85-0 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 65-85-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitization by inhalation and skin contact.

Safety Phrases:

S 22 Do not breathe dust.
S 24 Avoid contact with skin.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 65-85-0: 1

Canada - DSL/NDSL

CAS# 65-85-0 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 65-85-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 2/15/1999

Revision #12 Date: 2/11/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility