

BENZENECARBOXYLIC ACID

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1. Product Identification

Synonyms: Benzoic acid; benzeneformic acid; phenyl carboxylic acid, phenyl formic acid, dracylic acid.

CAS No.: 65-85-0

Molecular Weight: 122.12

Chemical Formula: C₆H₅COOH

Product Codes: CHEM-165 and others

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Benzoic Acid	65-85-0	100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! CAUSES EYE IRRITATION. MAY CAUSE IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.

SAF-T-DATA^(tm) Ratings

Health Rating: 1 - Slight

Flammability Rating: 2 - Moderate

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

Potential Health Effects

There is insufficient data in the published literature to perform a complete hazard evaluation for this product. Special precautions must be used in storage, use and handling. Protective equipment should be chosen using professional judgment.

Inhalation:

May cause irritation to the respiratory tract, (nose and throat); symptoms may include coughing and sore throat.

Ingestion:

Large oral doses may cause abdominal pain, sore throat, nausea, and vomiting.

Skin Contact:

If allowed to remain on skin, may cause irritation with redness and pain.

Eye Contact:

Causes irritation with redness and pain.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact:

Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact:

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

5. Fire Fighting Measures

Fire:

Flash point: 121C (250F) CC

Autoignition temperature: 570C (1058F)

Explosion:

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration 0.011 g/l. Vapor may explode if ignited in an enclosed area. Vapor from molten benzoic acid may form explosive mixture with air.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a well closed container stored under cold to warm conditions, 2 to 40 C, (36 to 104F).
Protect against physical damage. Isolate from any source of heat or ignition. Isolate from oxidizing materials. Isolate from flammable materials.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White, needle-like crystals.

Odor:

Faint pleasant odor.

Solubility:

0.29 g / 100 ml. water; sinks in water.

Density:

1.32

pH:

2.8 (saturated solution @ 25°C)

% Volatiles by volume @ 21°C (70°F):

0

Boiling Point:

249°C (480°F)

Melting Point:

122C (252F)

Vapor Density (Air=1):

4.2

Vapor Pressure (mm Hg):

1 @ 96°C (205°F)

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Emits toxic vapors and gas including phenol, benzene, and carbon monoxide when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Oxidizing agents, bases, and metals. Water solutions can react with metals to produce hydrogen gas.

Conditions to Avoid:

Heat, flame, ignition sources, dusting and incompatibles.

11. Toxicological Information

Oral rat LD50: 1700 mg/kg; LC50 rat > 26,000mg/L/Hr.; irritation skin rabbit: 500 mg/24H mild; eye rabbit: 100 mg severe; investigated as a mutagen.

Ingredient	Cancer Lists		IARC Category
	Known	Anticipated	
Benzoic Acid (65-85-0)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material may leach into groundwater. When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to have a half-life between 1 and 10 days. When released into water, this material is expected to readily biodegrade. When released into the water, this material is expected to have a half-life between 1 and 10 days. When released into water, this material is not expected to evaporate significantly. This material has a log octanol-water partition coefficient of less than 3.0. This material may bioaccumulate to some extent. When released into the air, this material is expected to be moderately removed from the atmosphere by wet deposition. When released to the air, this material is subject to removal from the atmosphere by gravitational settling.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

Chemical Inventory Status - Part 1

Ingredient	TSCA	EC	Japan	Australia
Benzoic Acid (65-85-0)	Yes	Yes	Yes	Yes

Chemical Inventory Status - Part 2

Ingredient	Korea	DSL	NDSL	Phil.
Benzoic Acid (65-85-0)	Yes	Yes	No	No

Federal, State & International Regulations - Part 1

Ingredient	RQ	TPQ	List	Chemical Catg.
Benzoic Acid (65-85-0)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	CERCLA	RCRA	TSCA
Benzoic Acid (65-85-0)	5000	261.33 No	8(d) No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **2** Flammability: **1** Reactivity: **0**

Label Hazard Warning:

WARNING! CAUSES EYE IRRITATION. MAY CAUSE IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Avoid breathing dust.

Wash thoroughly after handling.

Keep container closed.

Avoid dust cloud in presence of an ignition source.

Maintain adequate ventilation.

Label First Aid:

In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.

Product Use:

Laboratory Reagent and Consumer Hobby

Revision Information:

No Changes.

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