

# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Severely irritating to skin, eyes, and the respiratory system. Sensitizer. Harmful solid, do not ingest or inhale.	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>Benzoic Acid, Zone Refined</b> (number of passes: 13)		
Catalog Number	B0062	Supplier	TCI America 9211 N. Harborsgate St. Portland OR 1-800-423-8616
Synonym	Carboxybenzene		
Chemical Formula	C <sub>6</sub> H <sub>5</sub> COOH		
CAS Number	65-85-0	In case of Emergency Call	<b>Chemtrec®</b> <b>(800) 424-9300 (U.S.)</b> <b>(703) 527-3887 (International)</b>

## Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Benzoic Acid, Zone Refined (number of passes: 13)	65-85-0	-----	Not available.	Man LDLo (oral) 500 mg/kg Human TDLo (skin) 6 mg/kg Rat LD <sub>50</sub> (oral) 1700 mg/kg Mouse LD <sub>50</sub> (intraperitoneal) 1460 mg/kg

## Section III. Hazards Identification

Acute Health Effects	Extremely dangerous in case of inhalation (lung irritant). Severely irritating to skin, eyes, and the respiratory system. Sensitizer. Harmful solid, do not ingest or inhale. Very dangerous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Dangerous in case of ingestion. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Chronic Health Effects	<b>CARCINOGENIC EFFECTS</b> : Not available. <b>MUTAGENIC EFFECTS</b> : DNA inhibition: Human (lymphocyte) 5 mmol/L <b>TERATOGENIC EFFECTS</b> : Not available. Toxicity to the reproductive system: Not available. <b>Repeated or prolonged exposure to this compound is known to aggravate asthma.</b>

## Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.
Skin Contact	If the chemical gets spilled on a clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash any contaminated clothing before reusing.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as collar, tie, belt, or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	Remove dentures if any. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. NEVER give an unconscious person anything to ingest. Seek medical attention.

## Section V. Fire and Explosion Data

Flammability	Combustible.	Auto-Ignition	Not available.
Flash Points	closed cup: 120°C (248°F)	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ).		
Fire Hazards	No specific information is available regarding the flammability of this compound in the presence of various materials.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No additional information is available regarding the risks of explosion.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO <sub>2</sub> , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.		

**Section VI. Accidental Release Measures**

Spill Cleanup Instructions In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water.

**Section VII. Handling and Storage**

Handling and Storage Information IRRITANT. HARMFUL. Store away from heat and sources of ignition. Mechanical exhaust required. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. DO NOT ingest. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Always store away from incompatible compounds such as oxidizing agents, alkalis, moisture, and reducing agents.

**Section VIII. Exposure Controls/Personal Protection**

Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection Splash goggles. Lab coat. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Exposure Limits Not available.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Solid. (White crystals.)	Solubility	Soluble in methanol, diethyl ether. Very slightly soluble in cold water, hot water.
Specific Gravity	1.32 (Water = 1)		
Molecular Weight	122.12	Partition Coefficient	log Kow = 1.87
Boiling Point	249°C (480.2°F)	Vapor Pressure	1 mm of Hg (@ 96°C)
Melting Point	122°C (251.6°F)	Vapor Density	4.21 (Air = 1)
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	479°C (894.2°F)	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

**Section X. Stability and Reactivity Data**

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Highly reactive with strong oxidizing agents, alkalis, moisture, acids, and reducing agents.

**Section XI. Toxicological Information**

RTECS Number	DG0875000
Routes of Exposure	Eye contact. Ingestion. Inhalation. Skin contact.
Toxicity Data	Man LDLo (oral) 500 mg/kg Human TDLo (skin) 6 mg/kg Rat LD <sub>50</sub> (oral) 1700 mg/kg Mouse LD <sub>50</sub> (intraperitoneal) 1460 mg/kg
Chronic Toxic Effects	<b>CARCINOGENIC EFFECTS</b> : Not available. <b>MUTAGENIC EFFECTS</b> : DNA inhibition: Human (lymphocyte) 5 mmol/L <b>TERATOGENIC EFFECTS</b> : Not available. Toxicity to the reproductive system: Not available. <b>Repeated or prolonged exposure to this compound is known to aggravate asthma.</b>
Acute Toxic Effects	Extremely dangerous in case of inhalation (lung irritant). Severely irritating to skin, eyes, and the respiratory system. Sensitizer. Harmful solid, do not ingest or inhale. Very dangerous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Dangerous in case of ingestion. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Section XII. Ecological Information**

Ecotoxicity Not available.

Environmental Fate Not available.

**Section XIII. Disposal Considerations**

Waste Disposal Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of this substance.

**Section XIV. Transport Information**

DOT Classification Not a DOT controlled material (United States).

PIN Number NONE

Proper Shipping Name NONE

Packing Group (PG) NONE

DOT Pictograms

**Section XV. Other Regulatory Information and Pictograms**

TSCA Chemical Inventory (EPA) This product is **ON** the EPA Toxic Substances Control Act (TSCA) inventory.

WHMIS Classification (Canada) WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).

EINECS Number (EEC) 200-618-2

EEC Risk Statements R36/38- Irritating to eyes and skin.

Japanese Regulatory Data Not available.

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 5/21/2008.**  
**Printed 10/14/2010.**

**Notice to Reader**

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.