

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Combustible material; avoid heat and sources of ignition. May form explosive mixtures in air. Harmful compound, minimize exposure.	

Section I. Chemical Product and Company Identification

Chemical Name	Benzoic Acid Methyl Ester		
Catalog Number	B0074	Supplier	TGI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	Methyl Benzoate		
Chemical Formula	C ₆ H ₅ COOCH ₃		
CAS Number	93-58-3	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Benzoic Acid Methyl Ester	93-58-3	Min. 99.0(GC)	Not available.	Rat LD ₅₀ (oral) 1177mg/kg Mouse LD ₅₀ (oral) 3330mg/kg Rabbit LD ₅₀ (oral) 2170mg/kg

Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Not available. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	Combustible.	Auto-Ignition	Not available.
Flash Points	82°C (179.6°F) (C.C.)	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂).		
Fire Hazards	Not available.		
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.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions
 Combustible material. May form explosive mixtures in air. Harmful material. Keep away from heat. Mechanical exhaust required. Stop leak if without risk. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information
 COMBUSTIBLE. MAY FORM EXPLOSIVE MIXTURES IN AIR. HARMFUL. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively.
 Always store away from incompatible compounds such as oxidizing agents, acids, alkalis (bases).

Section VIII. Exposure Controls/Personal Protection

Engineering Controls
 Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protection
 Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.



Exposure Limits
 Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Colorless, clear.)	Solubility	Miscible with alcohol, ether, methanol. Soluble in most fixed oils. Water solubility: 157mg/l @ 30°C.
Specific Gravity	1.09 (water=1) @ 15°C	Partition Coefficient	Log K _{ow} = 2.12
Molecular Weight	136.15	Vapor Pressure	0.1 kPa (@ 39°C)
Boiling Point	197 to 202°C (386.6 to 395.6°F)	Vapor Density	4.68 (Air = 1)
Melting Point	-12°C (10.4°F)	Volatility	Not available.
Refractive Index	1.517	Odor	Pleasant.
Critical Temperature	Not available.	Taste	Not available.
Viscosity	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
 Air sensitive. Avoid excessive heat and light.

Incompatibilities
 Reactive with strong oxidizing agents, strong acids, strong alkalis (bases), nitrates.

Section XI. Toxicological Information

RTECS Number
 DH3850000

Routes of Exposure
 Eye Contact. Ingestion. Inhalation.

Toxicity Data
 Rat LD₅₀ (oral) 1177mg/kg
 Mouse LD₅₀ (oral) 3330mg/kg
 Rabbit LD₅₀ (oral) 2170mg/kg

Chronic Toxic Effects
CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY Not available.
 Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects
 Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Methyl benzoate occurs naturally in plants and some foods and is produced by microorganisms. Industrially it is used as a solvent, dye carrier, flavoring, and in perfume mfg. Methyl benzoate may be released to the environment from these natural and anthropogenic sources. Anthropogenic releases are to wastewater although there is some evidence that it occurs in stack emissions from coal-burning power plants. Methyl benzoate is weakly adsorbed by soil and if released on land, it would tend to leach into the soil. Some methyl benzoate may also be lost by volatilization. Biodegradation may occur in soil, although biodegradation rates are not available. Hydrolysis may be significant in highly alkaline soils. If released in water, methyl benzoate would be lost by volatilization (half-life 1.5 days in a model river) and biodegradation. Adsorption to sediment and bioconcentration in fish should not be important fate processes. In the atmosphere, methyl benzoate will slowly degrade by reaction with photochemically-produced hydroxyl radicals (estimated half-life 18.5 days). Wash out by rain should contribute to its removal from the atmosphere. The general population is exposed to methyl benzoate primarily from food. Occupational exposure should be primarily by dermal contact and inhalation. (HSDB)

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local 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 the substance.
----------------	---

Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not available.
Proper Shipping Name	Not available.
Packing Group (PG)	Not available.
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC). On DSL.
EINECS Number (EEC)	202-259-7
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
Japanese Regulatory Data	ENCS No. 3-1356

Section XVI. Other Information

Version 1.0
Validated on 7/12/2004.
Printed 1/20/2005.

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.