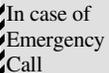


Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Irritating to skin, eyes, and the respiratory system. CARCINOGEN. MINIMIZE EXPOSURE. MUTAGEN. MINIMIZE EXPOSURE.	

Section I. Chemical Product and Company Identification

Chemical Name	Benzyl Acetate		
Catalog Number	A0022	Supplier	TCI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Acetic acid, phenylmethyl ester (CA INDEX NAME); Acetic Acid Benzyl Ester		
Chemical Formula	C ₉ H ₁₀ O ₂		
CAS Number	140-11-4	 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
Benzyl Acetate	140-11-4	Min. 99.0 (GC)	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen. This compound is classified as a mutagen. There is no acceptable exposure limit for a mutagen.	Rat LD ₅₀ (oral) 2490 mg/kg Mouse LD ₅₀ (oral) 830 mg/kg Rabbit LD ₅₀ (dermal) >5 gm/kg

Section III. Hazards Identification

Acute Health Effects	Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Tumorigenic effects. Rat TDLo Oral 72000 mg/kg for 180 days intermittent TOXIC EFFECTS: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria Gastrointestinal - Tumors Tumorigenic - Facilitates action of known carcinogens Rat TDLo Oral 257500 mg/kg for 103 weeks intermittent TOXIC EFFECTS: Tumorigenic - Neoplastic by RTECS criteria Gastrointestinal - Tumors Tumorigenic Effects - Other reproductive system tumors Mouse TDLo Oral 515000 mg/kg for 103 weeks intermittent TOXIC EFFECTS: Tumorigenic - Carcinogenic by RTECS criteria Liver - Tumors Gastrointestinal - Tumors 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	May be combustible at high temperature.	Auto-Ignition	460 °C (860 °F)
Flash Points	102 °C (215.6 °F)	Flammable Limits	LOWER: 0.9% UPPER: 8.4%
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	Irritating material. Carcinogenic material. Mutagenic material. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Consult federal, state, and/or local authorities for assistance on disposal.
----------------------------	--

Section VII. Handling and Storage

Handling and Storage Information	IRRITANT. CARCINOGEN. MUTAGEN. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe gas/fumes/ vapor/spray. Always store away from incompatible compounds such as oxidizing agents, reducing 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	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen. This compound is classified as a mutagen. There is no acceptable exposure limit for a mutagen.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Clear, colorless.)	Solubility	Practically insoluble in water. Miscible with alcohol, ether. Soluble in acetone, chloroform, benzene.
Specific Gravity	1.06 (water=1)		
Molecular Weight	150.17	Partition Coefficient	LOG P _{ow} : 1.96
Boiling Point	214 °C (417.2 °F)	Vapor Pressure	0.25 kPa (@ 60 °C)
Melting Point	-51 °C (-59.8 °F)	Vapor Density	5.2 (Air = 1)
Refractive Index	1.50	Volatility	Not available.
Critical Temperature	Not available.	Odor	Characteristic, fruity.
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	Reactive with oxidizing agents, reducing agents, acids, alkalis (bases).

Section XI. Toxicological Information

RTECS Number	AF5075000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Rat LD ₅₀ (oral) 2490 mg/kg Mouse LD ₅₀ (oral) 830 mg/kg Rabbit LD ₅₀ (dermal) >5 gm/kg

Chronic Toxic Effects	<p>CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Tumorigenic effects. Rat TDLo Oral 72000 mg/kg for 180 days intermittent TOXIC EFFECTS: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria Gastrointestinal - Tumors Tumorigenic - Facilitates action of known carcinogens Rat TDLo Oral 257500 mg/kg for 103 weeks intermittent TOXIC EFFECTS: Tumorigenic - Neoplastic by RTECS criteria Gastrointestinal - Tumors Tumorigenic Effects - Other reproductive system tumors Mouse TDLo Oral 515000 mg/kg for 103 weeks intermittent TOXIC EFFECTS: Tumorigenic - Carcinogenic by RTECS criteria Liver - Tumors Gastrointestinal - Tumors DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.</p>
Acute Toxic Effects	<p>Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p>

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	<p>Benzyl acetate occurs in a number of plants, particularly jasmine. Benzyl acetate's production and use in artificial jasmine and other perfumes, as a flavoring, as a solvent may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 0.18 mm Hg at 25 deg C indicates benzyl acetate is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase benzyl acetate will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the estimated half-life for this reaction in air is 2.5 days. If released to soil, an estimated Koc of 280 suggests that benzyl acetate is expected to have moderate mobility. Volatilization from wet soil surfaces may be important based upon this compound's estimated Henry's Law constant of 1.1X10⁻⁵ atm-cu m/mole. Biodegradation is expected to be an important process in both soil and water. Benzyl acetate reached 92 to 96% of its theoretical BOD over a period of 4 weeks. If released into water, the estimated Koc suggests that some adsorption of benzyl acetate to suspended solids and sediment in the water column is expected. Volatilization from water surfaces may be an important fate process given this compound's estimated Henry's Law constant. The potential for bioconcentration in aquatic organisms is low based on this compound's estimated BCF of 18. An estimated hydrolysis half-life of 38 days at pH 7 suggests that hydrolysis is not expected to be an important process. Occupational exposure to benzyl acetate may occur through inhalation and dermal contact with this compound at workplaces where benzyl acetate is produced or used. The general population may be exposed to benzyl acetate via ingestion of food, and inhalation and dermal contact with consumer products containing benzyl acetate.</p>

Section XIII. Disposal Considerations

Waste Disposal	<p>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.</p>
----------------	--

Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not applicable.
Proper Shipping Name	Not applicable.
Packing Group (PG)	Not applicable.
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 D-2B: Material causing other toxic effects (TOXIC). On DSL.
EINECS Number (EEC)	205-399-7
EEC Risk Statements	R36/37/38- Irritating to eyes, respiratory system and skin. R45- May cause cancer. R46- May cause heritable genetic damage. R47- May cause birth defects.
Japanese Regulatory Data	ENCS No. 3-1020; 3-1045

Section XVI. Other Information

Version 1.0
Validated on 6/15/2010.
Printed 6/15/2010.

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.

Printed 6/15/2010.