

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
 	Flammable material; avoid heat and sources of ignition. Irritating to skin, eyes, and the respiratory system.	   

Section I. Chemical Product and Company Identification

Chemical Name	Acetic Acid sec-Butyl Ester		
Catalog Number	A0025	Supplier	TGI America 9211 N. Harborage St. Portland OR 1-800-423-8616
Synonym	sec-Butyl Acetate		
Chemical Formula	CH ₃ COOCH(CH ₃)CH ₂ CH ₃		
CAS Number	105-46-4	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
Acetic Acid sec-Butyl Ester	105-46-4	Min. 98.0 (GC)	Not available.	Not available.

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 : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Not available. There is no known effect from chronic exposure to this product. 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. 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. Treat symptomatically and supportively.
Skin Contact	After contact with skin, wash immediately with plenty of water. 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. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.
Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform artificial respiration. WARNING: It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention. Treat symptomatically and supportively.
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, administer artificial respiration. 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. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

Section V. Fire and Explosion Data

Flammability	Flammable.	Auto-Ignition	Not available.
Flash Points	16°C (60.8°F).	Flammable Limits	LOWER: 1.3% UPPER: 7.5%
Combustion Products	These products are toxic carbon oxides (CO, CO ₂).		
Fire Hazards	Extremely flammable in presence of open flames and sparks, of shocks, of heat.		
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.		

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Emergency phone number (800) 424-9300

Fire Fighting Media
and Instructions

Flammable liquid.
SMALL FIRE: Use DRY chemicals, CO₂, alcohol foam or water spray.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Consult with local fire authorities before attempting large scale fire-fighting operations.

Section VI. Accidental Release MeasuresSpill Cleanup
Instructions

Flammable liquid. Irritating liquid.
Keep away from heat and sources of ignition. Mechanical exhaust required. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and StorageHandling and Storage
Information

FLAMMABLE. IRRITANT. Reactive with strong oxidizers; may be ignited by heat, sparks, or flames. Vapors may travel to source of ignition and flash back. Tightly seal container and store in a cool place. Closed containers may explode from heat of a fire. Empty containers may pose a fire risk. Evaporate residue under a fume hood if possible. Ground all equipment containing material. Keep away from heat and sources of ignition. Mechanical exhaust required. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Avoid contact with skin and eyes.
Always store away from incompatible compounds such as oxidizing agents.

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. A MSHA/NIOSH approved respirator must 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

Colorless liquid.

Solubility

Soluble in acetone.
Miscible with alcohol and ether.
Water solubility= 6200 mg/L @ 20°C.

Specific Gravity

0.872

Molecular Weight

116.16

Partition Coefficient

Not available.

Boiling Point

111-112°C

Vapor Pressure

17 mm Hg @ 25°C

Melting Point

-99°C

Vapor Density

4

Refractive Index

1.389 @ 20°C

Volatility

Not available.

Critical Temperature

Not available.

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

Reactive with oxidizing agents.

Section XI. Toxicological Information

RTECS Number

AF7380000

Routes of Exposure

Eye contact. Inhalation. Ingestion. Skin contact.

Toxicity Data

Not available.

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY Not available.
There is no known effect from chronic exposure to this product. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic 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.

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Emergency phone number (800) 424-9300

Section XII. Ecological Information

Ecotoxicity Not available.

Environmental Fate Evaporation of sec-butyl acetate solvent from lacquers and enamels is the dominant anthropogenic emission source of sec-butyl acetate into the environment. If released to soil, sec-butyl acetate may be susceptible to biodegradation based on the demonstrated biodegradability of the similarly structured compounds n-butyl acetate and isobutyl acetate in standard BOD tests. Chemical hydrolysis in moist alkaline soils (pH approaching 9 or higher) may be important, but not in neutral or acidic soils. sec-Butyl acetate may be subject to moderate-to-high leaching based on estimated Koc values of 30 and 158. Volatilization from dry soil surfaces is likely to be rapid. If released to water, volatilization is expected to be an important removal mechanism. The volatilization half-life from a river one meter deep flowing 1 m/sec with a wind velocity of 3 m/sec has been estimated to be 5.4 hours. The hydrolysis half-lives of sec-butyl acetate at pHs 7.0, 8.0, and 9.0 are about 12.6 years, 1.26 years and 46 days, respectively, at 25 deg C indicating that hydrolysis might only be important in very alkaline environmental waters. Aquatic adsorption and bioconcentration are not expected to be significant. Biodegradation in natural water may be possible based on the demonstrated biodegradability of n-butyl acetate and isobutyl acetate in standard BOD tests. If released to air, sec-butyl acetate will exist almost entirely in the vapor-phase in the ambient atmosphere. The dominant degradation mechanism in the atmosphere will be the vapor-phase reaction with photochemically produced hydroxyl radicals which has an estimated half-life of about 1.86 days in an average atmosphere. General population exposure to sec-butyl acetate can occur through consumption of food (in which it may occur naturally) and by inhalation of contaminated air, especially in the vicinity of usage of lacquers or enamels containing sec-butyl acetate solvent. Occupational exposure by inhalation and dermal routes may be significant. (HSDB)

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 DOT CLASS 3: Flammable liquid.

PIN Number UN1123

Proper Shipping Name Butyl acetates

Packing Group (PG) II

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) WHMIS CLASS B-2: Flammable liquid with a flash point lower than 35°C (100°F).

EINECS Number (EEC) 203-300-1

EEC Risk Statements R11- Highly flammable.
R18- In use, may form flammable/explosive vapor-air mixture.
R36/37/38- Irritating to eyes, respiratory system and skin.

Japanese Regulatory Data Not available.

Section XVI. Other Information

Version 1.0
Validated on 4/2/1998.
Printed 1/10/2005.

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.