

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. Moisture sensitive material.	   

Section I. Chemical Product and Company Identification

Chemical Name	Acetic Acid Ethyl Ester		
Catalog Number	A0030	Supplier	TGI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Ethyl Acetate		
Chemical Formula	CH ₃ COOCH ₂ CH ₃		
CAS Number	141-78-6	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 Ethyl Ester	141-78-6	Min. 99.5 (GC)	ACGIH TLV-TWA: 400ppm	Rat LC ₅₀ (inhalation) 200gm/m ³ Rat LD ₅₀ (oral) 5620mg/kg Rabbit LD ₅₀ (dermal) >20ml/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 : 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	Flammable.	Auto-Ignition	427°C (800.6°F)
Flash Points	-3°C (26.6°F) (C.C.)	Flammable Limits	LOWER: 2.2% UPPER: 11.5%
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	Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions Flammable liquid. Irritating material. Moisture sensitive material. Keep away from heat. 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. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information FLAMMABLE. IRRITANT. MOISTURE SENSITIVE. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas/fumes/ vapor/spray. 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.

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 ACGIH TLV-TWA: 400ppm

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Clear, colorless.)	Solubility	1ml dissolves in 10ml water @ 25°C; more soluble at lower and less soluble at higher temperatures.
Specific Gravity	0.9 (water=1)		Miscible with alcohol, acetone, chloroform, ether.
Molecular Weight	88.11	Partition Coefficient	Log K _{ow} = 0.73
Boiling Point	77 to 78°C (170.6 to 172.4°F)	Vapor Pressure	9.7kPa (@ 20°C)
Melting Point	-84°C (-119.2°F)	Vapor Density	3.04 (Air = 1)
Refractive Index	1.37	Volatility	Not available.
Critical Temperature	Not available.	Odor	Ether-like, fruity odor.
Viscosity	Dynamic: 0.44 cP @ 25°C	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 Moisture sensitive. Avoid excessive heat and light. Slowly decomposes by moisture, then acquires an acid reaction.

Incompatibilities Reactive with strong oxidizing agents.

Section XI. Toxicological Information

RTECS Number AH5425000

Routes of Exposure Eye Contact. Ingestion. Inhalation.

Toxicity Data
 Rat LC₅₀ (inhalation) 200gm/m³
 Rat LD₅₀ (oral) 5620mg/kg
 Rabbit LD₅₀ (dermal) >20ml/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
 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.

Section XII. Ecological Information

Ecotoxicity Not available.

Environmental Fate Ethyl acetate's production and use as a pharmaceutical aid, in artificial fruit essences, and as a solvent may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 93 mm Hg at 25 deg C indicates ethyl acetate will exist solely as a vapor in the ambient atmosphere. Vapor-phase ethyl acetate will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 9.4 days. If released to soil, ethyl acetate is expected to have high mobility based upon an estimated Koc of 59. Volatilization from moist soil surfaces is expected to occur based upon a Henry's Law constant of 1.34×10^{-4} atm-cu m/mole. Ethyl acetate's vapor pressure indicates the potential for volatilization from dry soil surfaces exists. Biodegradation is expected to be an important process in both soil and water, based upon ethyl acetate's biodegradation in aqueous screening studies. 93% biodegradation was observed in a complete mix continuous-flow activated sludge system. 26.6 and 57.1% of ethyl acetate's theoretical BOD was reached in 5 days using the standard dilution method and seawater dilution method, respectively. If released into water, ethyl acetate is not expected to adsorb to suspended solids and sediment in water based on the estimated Koc. Volatilization from water surfaces is expected to be an important fate process based on ethyl acetate's Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 8.9 hours and 5.6 days, respectively. An estimated BCF of 3.2 suggests the potential for bioconcentration in aquatic organisms is low. Ethyl acetate's hydrolysis half-life at 25 deg C and pH 7 is 2.0 years. Occupational exposure to ethyl acetate may occur through inhalation and dermal contact with this compound at workplaces where ethyl acetate is produced or used or where adhesives, thinners, degreasers, paints, inks, and dome reagents are used. The general population may be exposed to ethyl acetate via inhalation of ambient air, ingestion of food and drinking water, or dermal contact with consumer products containing this compound. (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 CLASS 3: Flammable liquid.

PIN Number UN1173

Proper Shipping Name Ethyl Acetate

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. On EPA IRIS Database.

WHMIS Classification (Canada) CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

EINECS Number (EEC) 205-500-4

EEC Risk Statements R11- Highly flammable.
R36- Irritating to eyes.

Japanese Regulatory Data ENCS No. 2-726

Section XVI. Other Information

Version 1.0
Validated on 10/11/2004.
Printed 1/10/2005.

Notice to Reader

TCl 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.