

## Material Safety Data Sheet

### Ethyl acetate MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Ethyl acetate  
**Catalog Codes:** 11001, 12002, 14004  
**CAS#:** 141-78-6  
**TSCA:** TSCA 8(b) inventory: Ethyl acetate  
**CI#:** Not applicable.  
**Synonym:** Acetic Acid, Ethyl Ester Acetic Ether  
**Chemical Name:** Ethyl Acetate  
**Chemical Formula:** C4-H8-O2  
**Contact Information:** **Runa Chemicals Pvt. Ltd.**  
**W-11 & W-23, M.I.D.C., Phase 2**  
**Dombivli – 421204. Maharashtra. (India)**  
International Sales: +91 (0) 251 2871 106 / 2870473  
Fax: +91 (0) 251 2871 757  
Order Online: [www.runachemicals.com](http://www.runachemicals.com)  
**Emergency Telephone:** +91 (0) 251 2871 106

#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Ethyl acetate	141-78-6	100

**Toxicological Data on Ingredients:** Ethyl acetate: ORAL (LD50): Acute: 5620 mg/kg [Rat]. 4100 mg/kg [Mouse]. 4935 mg/kg [Rabbit]. VAPOR (LC50): Acute: 45000 mg/m 3 hours [Mouse]. 16000 ppm 6 hours [Rat].

#### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant).

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to mucous membranes, upper respiratory tract.

The substance may be toxic to blood, kidneys, liver, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage.

#### Section 4: 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. Cold water may be used. Get medical attention.

**Skin Contact:**

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Cold water may be used.

**Serious Skin Contact:** Not available.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

**Serious 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 mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available.

#### Section 5: Fire and Explosion Data

**Flammability of the Product:** Flammable.

**Auto-Ignition Temperature:** 426.67°C (800°F)

**Flash Points:** CLOSED CUP: -4.4°C (24.1°F). (TAG) OPEN CUP: 7.2°C (45°F) (Cleveland).

**Flammable Limits:** LOWER: 2.2% UPPER: 9%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:**

Highly flammable in presence of open flames and sparks, of heat.

Slightly flammable to flammable in presence of oxidizing materials, of acids, of alkalis.

Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of static discharge: Not available.

Slightly explosive in presence of heat.

Non-explosive in presence of shocks.

**Fire Fighting Media and Instructions:**

Flammable liquid, soluble or dispersed in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use alcohol foam, water spray or fog.

**Special Remarks on Fire Hazards:**

Vapor may travel considerable distance to source of ignition and flash back.

When heated to decomposition it emits acrid smoke and irritating fumes.

**Special Remarks on Explosion Hazards:**

The liquid produces a vapor that forms explosive mixtures with air at normal temperatures.

Explosive reaction with lithium tetrahydroaluminate.

## Section 6: Accidental Release Measures

### Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

### Large Spill:

Flammable liquid.

Keep away from heat. Keep away from sources of ignition. 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. Be careful that the product is not present at a concentration level above TLV.

Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

### Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Moisture sensitive.

## Section 8: 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 stations and safety showers are proximal to the work-station location.

### Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus 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:

TWA: 500 STEL: 750 (ppm) from ACGIH (TLV) [United States]

TWA: 750 STEL: 1000 (ppm) from OSHA (PEL) [United States]

TWA: 500 STEL: 1000 [Australia]

TWA: 1185 STEL: 2375 (mg/m<sup>3</sup>) [Australia]

TWA: 750 STEL: 1500 (ppm) [United Kingdom (UK)]

TWA: 1810 STEL: 3620 (mg/m<sup>3</sup>) [United Kingdom (UK)]

TWA: 1800 STEL: 2400 from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

### Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Ethereal. Fruity. (Slight.)

**Taste:** Bittersweet, wine-like burning taste

**Molecular Weight:** 88.11 g/mole

**Color:** Colorless.

**pH (1% soln/water):** Not available.

**Boiling Point:** 77°C (170.6°F)

**Melting Point:** -83°C (-117.4°F)

**Critical Temperature:** 250°C (482°F)

**Specific Gravity:** 0.902 (Water = 1)

**Vapor Pressure:** 12.4 kPa (@ 20°C)

**Vapor Density:** 3.04 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** 3.9 ppm

**Water/Oil Dist. Coeff.:** The product is more soluble in oil;  $\log(\text{oil/water}) = 0.7$

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, diethyl ether, acetone.

**Solubility:** Soluble in cold water, hot water, diethyl ether, acetone, alcohol, benzene.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Heat, ignition sources (flames, sparks, static), incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Also incompatible with nitrates, chlorosulfonic acid, oleum, potassium-tert-butoxide, and lithium tetrahydroaluminate.

Moisture sensitive. On storage, it is slowly decomposed by water.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

### Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 4100 mg/kg [Mouse].

Acute toxicity of the vapor (LC50): 45000 mg/m<sup>3</sup> 3 hours [Mouse].

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

Causes damage to the following organs: mucous membranes, upper respiratory tract.

May cause damage to the following organs: blood, kidneys, liver, central nervous system (CNS).

**Other Toxic Effects on Humans:**

Hazardous in case of ingestion, of inhalation.

Slightly hazardous in case of skin contact (irritant, permeator).

**Special Remarks on Toxicity to Animals:** LD50 [Rabbit] - Route: skin; Dose >20,000 ml/kg

**Special Remarks on Chronic Effects on Humans:**

May affect genetic material (mutagenic).

May cause adverse reproductive effects. based on animal test data. No human data found at this time.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects:

Skin: May cause skin irritation.

Eyes: Causes eye irritation. May cause irritation of the conjunctiva.

Inhalation: May cause respiratory tract and mucous membrane irritation. May affect respiration and may cause acute pulmonary edema. May affect gastrointestinal tract (nausea, vomiting). May affect behavior/central nervous system (mild central nervous system depression - exhilaration, talkativeness, boastfulness, belligerency, vertigo, diplopia, drowsiness, slurred speech, slowed reaction time, dizziness, lightheadedness, somnolence, ataxia, unconsciousness, irritability, fatigue, sleep disturbances, reduced memory and concentration, stupor, coma), cardiovascular system (peripheral vascular collapse (shock) - rapid pulse, hypotension, cold pale skin, hypothermia). Other symptoms may include: flushing of face and sweating.

Ingestion: May cause gastrointestinal tract irritation with nausea and vomiting. May affect blood, behavior/central nervous system (CNS depression - effects may be similar to that of inhalation).

Chronic Potential Health Effects:

Skin: Repeated or prolonged skin contact may cause drying and cracking of the skin.

Ingestion: Prolonged or repeated ingestion may affect the liver.

Inhalation: Prolonged inhalation may affect behavior/central nervous system (symptoms similar to those of acute inhalation), and cause liver, kidney, lung, and heart damage. It may also affect metabolism, and blood (anemia, leukocytosis).

**Section 12: Ecological Information**

**Ecotoxicity:**

Ecotoxicity in water (LC50): 220 mg/l 96 hours [Fish (Fathead minnow)]. 212.5 ppm 96 hours [Fish (Indian catfish)].

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

**Section 13: Disposal Considerations**

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14: Transport Information**

**DOT Classification:** CLASS 3: Flammable liquid.

**Identification :** Ethyl Acetate UNNA: 1173 PG: II

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

### Federal and State Regulations:

Connecticut hazardous material survey.: Ethyl acetate  
Illinois toxic substances disclosure to employee act: Ethyl acetate  
Illinois chemical safety act: Ethyl acetate  
New York release reporting list: Ethyl acetate  
Rhode Island RTK hazardous substances: Ethyl acetate  
Pennsylvania RTK: Ethyl acetate  
Florida: Ethyl acetate  
Minnesota: Ethyl acetate  
Massachusetts RTK: Ethyl acetate  
Massachusetts spill list: Ethyl acetate  
New Jersey: Ethyl acetate  
New Jersey spill list: Ethyl acetate  
Louisiana spill reporting: Ethyl acetate  
California Director's list of Hazardous Substances: Ethyl acetate  
TSCA 8(b) inventory: Ethyl acetate  
TSCA 4(a) final test rules: Ethyl acetate  
TSCA 8(a) IUR: Ethyl acetate  
TSCA 12(b) annual export notification: Ethyl acetate  
CERCLA: Hazardous substances.: Ethyl acetate: 5000 lbs. (2268 kg)

### Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### Other Classifications:

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

### DSCL (EEC):

R11- Highly flammable.  
R36- Irritating to eyes.  
S2- Keep out of the reach of children.  
S16- Keep away from sources of ignition - No smoking.  
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S33- Take precautionary measures against static discharges.  
S46- If swallowed, seek medical advice immediately and show this container or label.

### HMIS (U.S.A.):

**Health Hazard:** 2

**Fire Hazard:** 3

**Reactivity:** 0

**Personal Protection:** g

**National Fire Protection Association (U.S.A.):**

**Health:** 1

**Flammability:** 3

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves.  
Lab coat.  
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.  
Safety glasses.

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available

**Created:** 01/07/2008 12:10 PM

**Last Updated:** 01/07/2008 12:10 PM

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Runa chemicals Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Runa chemicals Pvt. Ltd. has been advised of the possibility of such damages.*