SAFETY DATA SHEET

Ethyl Acetate

SECTION 1  IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<table>
<thead>
<tr>
<th>Trade name</th>
<th>Ethyl Acetate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Acetidin, Acetic acid ethyl ester, Ethyl acetic ester</td>
</tr>
<tr>
<td>Use</td>
<td>Flavors and Fragrances, Industrial use, Intermediate, Paint and Coatings, Pharmaceutical, Process/Extraction Solvent, Process material, Raw material for chemical processes, Raw material for industry, Raw material for pharmaceuticals, Solvent</td>
</tr>
<tr>
<td>Company</td>
<td>Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)</td>
</tr>
<tr>
<td>Address</td>
<td>12120 Wickchester Lane Houston TX 77079</td>
</tr>
<tr>
<td>Telephone</td>
<td>CHEMTREC North America Transportation Emergency (24-hr) (800) 424-9300</td>
</tr>
<tr>
<td></td>
<td>CHEMTREC World Wide (703) 527-3887</td>
</tr>
<tr>
<td></td>
<td>Other Emergencies (24-hr) (337) 494-5142</td>
</tr>
<tr>
<td></td>
<td>SDS and Product Information (8:00am-4:30pm CST) (281) 588-3491</td>
</tr>
<tr>
<td></td>
<td>Health and Safety Information (7:30am-4:00pm CST) (281) 588-3492</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:SasolElectronicSDS@us.sasol.com">SasolElectronicSDS@us.sasol.com</a></td>
</tr>
</tbody>
</table>

SECTION 2  HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>OSHA/GHS Hazards</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td></td>
</tr>
<tr>
<td>Eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td>Category 3 (Narcotic effects)</td>
</tr>
</tbody>
</table>

LABEL ELEMENTS

Hazard symbols

Signal word       Danger

Hazard statements 
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention   P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ethyl Acetate

P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/ eye protection/ face protection.
P264 Wash skin thoroughly after handling.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.

Response
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.

Storage P403 + P405 + P235 Store locked up in a well-ventilated place. Keep cool.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Acetate</td>
<td>141-78-6</td>
<td>100</td>
</tr>
</tbody>
</table>

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4 FIRST AID MEASURES

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.

Ingestion If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
SAFETY DATA SHEET

Ethyl Acetate

SECTION 5  FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

Fire/explosion  Vapours may form explosive mixture with air. Flash back possible over considerable distance. Use water spray to disperse the vapors. NFPA Class 1B flammable liquid.

Suitable extinguishing media  Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Protective equipment and precautions for firefighters  In the event of fire, wear self-contained breathing apparatus.

Further information  Keep containers and surroundings cool with water spray. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

SECTION 6  ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up  Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

SECTION 7  HANDLING AND STORAGE

Safe handling advice  Ensure all equipment is electrically grounded before beginning transfer operations. Keep away from heat and sources of ignition.

Storage/Transport pressure  Ambient

Load/Unload temperature  Ambient

SECTION 8  EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES  Air contaminant levels should be controlled below the PEL or TLV for this product (see Exposure Guidelines). Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment.

PERSONAL PROTECTIVE EQUIPMENT

Eyes  Chemical resistant goggles must be worn., Face-shield

Skin  Wear suitable protective clothing, gloves and eye/face protection.
SAFETY DATA SHEET

Ethyl Acetate

Inhalation  Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Use NIOSH approved respiratory protection.

EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure limit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Acetate</td>
<td>ACGIH TLV (8-hour) 400 ppm 1,400 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (Permissible Exposure Limit) 400 ppm 1,400 mg/m³</td>
</tr>
</tbody>
</table>

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit  
TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**  liquid; 

**Colour**  Clear, colorless 

**Form**  liquid 

**Odour**  ester-like 

**Odour Threshold**  No data available 

**Flash point**  -4 °C, 25 °F; 

**Flammability**  Upper explosion limit: 11.5 % (V) Lower explosion limit: 2.1 % (V) 

**Boiling point/boiling range**  77 °C, 170 °F; 

**Melting point/range**  -84 °C, -119 °F; 

**Auto-ignition temperature**  426 °C, 799 °F; 

**Decomposition temperature**  No data available 

**Flammability (solid, gas)**  No data available 

**Vapour pressure**  97 hPa @ 20 °C, 68 °F; 

**Vapour density**  1.2
Ethyl Acetate

Density 0.90 g/cm³ @ 20 °C, 68 °F;
Specific gravity No data available
Water solubility completely miscible
Viscosity No data available
Viscosity, dynamic 0.45 mPa.s @ 20 °C, 68 °F;
 pH Not applicable
Evaporation rate No data available
Partition coefficient: n-octanol/water log Pow: 0.68; @ 25 °C, 77 °F;

SECTION 10 STABILITY AND REACTIVITY

Reactivity Stable under recommended storage conditions.
Chemical stability No decomposition if stored and applied as directed.
Conditions to avoid Heat, flames and sparks.
Hazardous decomposition products None known.
Materials to avoid Alkali metals
Strong oxidizing agents
Hazardous polymerisation None known.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute dermal toxicity LD50 Rabbit: > 2,000 mg/kg (literature value)
Acute inhalation toxicity No data available
Acute oral toxicity LD50 Rat: > 2,000 mg/kg (literature value)
Skin corrosion/irritation (Rabbit) Not irritating, (literature value)
Ethyl Acetate

**Germ cell mutagenicity**

Genotoxicity in vitro:
Type: Ames test
System: Salmonella typhimurium; with and without metabolic activation
Result: In vitro tests did not show mutagenic effects
(literature value)

Genotoxicity in vivo:
No data available

Assessment Mutagenicity:
Based on available data, the classification criteria are not met.

**Reproductive toxicity**

Reproductive toxicity:
No data available

Assessment Reproductive toxicity:
No data available

Teratogenicity:
No data available

Assessment teratogenicity:
No data available

**STOT - single exposure**
The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

**STOT - repeated exposure**
No data available

**Aspiration toxicity**
No data available

**Carcinogenicity**
Assessment carcinogenicity:
Contains no ingredient listed as a carcinogen

---

**SECTION 12  ECOLOGICAL INFORMATION**

**Toxicity to fish**
LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; semi-static test
(literature value)
Ethyl Acetate

**Toxicity to aquatic invertebrates**  
EC50 (Daphnia magna (Water flea)) 48 hours: > 100 mg/l; static test (literature value)

**Toxicity to algae**  
EC50 (Desmodesmus subspicatus (green algae)) 72 hours: > 100 mg/l; static test (literature value)

**Chronic toxicity to aquatic invertebrates**  
NOEC (Daphnia magna (Water flea)) 21 d: > 1 - 10 mg/l; semi-static test; OECD Test Guideline 211 (literature value)

**Biodegradation**  
Readily biodegradable.

**OECD Test Guideline 301B (28 d):** > 60 % (literature value)

**Bioaccumulative potential**  
No bioaccumulation is to be expected (log Pow <= 4).

**Mobility in soil**  
No data available

**Other adverse effects**  
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

---

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste Code**  
U112 - Ethyl Acetate - (RQ 5,000 LB).D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

**Disposal methods**  
Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

**Empty containers.**  
Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

---

**SECTION 14 TRANSPORT INFORMATION**

**DOT**  
UN 1173, Ethyl Acetate, 3, II  
When shipped in quantities greater than 5,000 lbs, RQ must be added to the shipping description.
IATA  UN 1173, Ethyl Acetate, 3, II
When shipped in quantities greater than 5,000 lbs, RQ must be added to the shipping
description.

IMDG  UN 1173, Ethyl Acetate, 3, II
When shipped in quantities greater than 5,000 lbs, RQ must be added to the shipping
description.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks  No data available

SECTION 15  REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Listing
Components  CAS-No.
Acetic acid ethyl ester  141-78-6

SARA 302 Status
Components  CAS-No.  Weight percent
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Classification
"Fire hazard", "Immediate (acute) health hazard"

SARA 313 Chemical
Components  CAS-No.  Weight percent
This material does not contain any chemical components with known CAS numbers that exceed the threshold
(De Minimis) reporting levels established by SARA Title III, Section 313.

US. EPA CERCLA Hazardous Substances (40 CFR 302)
Components  Reportable Quantity  Weight percent
Acetic acid ethyl ester  5,000 LB  100 %

INTERNATIONAL REGULATIONS

WHMIS Classification
Flammable liquids  Category 2
Eye irritation  Category 2A
Specific target organ toxicity - single exposure  Category 3 (Narcotic effects)
European Union
Classification according to Regulation (EU) 1272/2008.

- Flammable liquids, Category 2
- Eye irritation, Category 2
- Specific target organ toxicity - single exposure, Category 3 (Narcotic effects)

Australia. Inventory of Chemical Substances (AICS)  Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS) Listed
Japan. ISHL - Inventory of Chemical Substances Listed
Canada. Domestic Substances List (DSL) Inventory Listed
Canada. Non-Domestic Substance Listing (NDSL) Not listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS) Listed
Korea. Existing Chemicals Inventory (KECI) Listed
China. Inventory of Existing Chemical Substances (IECSC) Listed
Mexico Listed
New Zealand. Inventory of Chemical Substances Listed
Switzerland Listed
Taiwan. National Existing Chemical Inventory (NECI) Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65 Components
none

CAS-No.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

<table>
<thead>
<tr>
<th>HMIS®</th>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/ Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS®: Health, Flammability, Physical Hazard/ Instability
NFPA Ratings: 1-4 for Health, Flammability, Stability
SAFETY DATA SHEET

Ethyl Acetate

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