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>MSDS 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:SasolElectronicDS@us.sasol.com">SasolElectronicDS@us.sasol.com</a></td>
</tr>
</tbody>
</table>

SECTION 2  HAZARDS IDENTIFICATION

GHS Hazards

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

LABEL ELEMENTS

Hazard symbols

![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.
- P233   Keep container tightly closed.
- P240   Ground/bond container and receiving equipment.
- P241   Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Ethyl Acetate

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 or doctor/ physician 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.

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 IB flammable liquid.
SAFETY DATA SHEET

Ethyl Acetate

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.

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

Components
Exposure limit(s)
Ethyl Acetate
ACGIH TLV (8-hour) 400 ppm 1,400 mg/m3
OSHA PEL 400 ppm 1,400 mg/m3
Ethyl Acetate

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

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
Ethyl Acetate

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)
Eye damage/irritation  (rabbit)
slight irritation, (literature value)
Respiratory or skin sensitization  guinea pig: not sensitizing; Maximisation Test
OECD Test Guideline 406
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
Ethyl Acetate

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

Reproductive toxicity:

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)

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)

Bioaccumulation
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 nor toxic (PBT).;
### SECTION 13  DISPOSAL CONSIDERATIONS

<table>
<thead>
<tr>
<th>Waste Code</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal methods</td>
<td>Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.</td>
</tr>
<tr>
<td>Empty containers</td>
<td>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.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>U.S. FEDERAL REGULATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Hazards (HCS 1994)</td>
</tr>
</tbody>
</table>

TSCA Inventory Listing

| Components | Acetic acid ethyl ester | CAS-No. | 141-78-6 |

SARA 302 Status

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
</table>
SAFETY DATA SHEET

Ethyl Acetate

SARA 302: 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
SARA 313: 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
Class B, Division 2: Flammable liquid.
Class D, Division 2, Subdivision B: Toxic material.

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. Industrial Safety & Health Law (ISHL) Inventory | Listed
Canada. Domestic Substances List (DSL) Inventory | Listed
Canadian Non-Domestic Substance Listing (NDSL) | Not listed
European Inventory of Existing Commercial Chemical Substances (EINECS) Listing | Listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS) | Listed
Korea. Existing Chemicals Inventory (KECI) | Listed
China. Inventory of Existing Chemical Substances (IECSC) | Listed
Mexico. National Inventory of Chemical Substances (INSQ) | Listed
New Zealand. Inventory of Chemicals (NZIoC) | Listed
Switzerland. Inventory of Notified New Substances (CHINV) | 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></th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS®</td>
<td>2</td>
<td>3</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>NFPA</td>
<td>2</td>
<td>3</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

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