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

Trade name Ethyl Acrylate
Synonyms Acrylic acid ethyl ester; Ethoxycarbonyl ethylene
Use Industrial use, Intermediate, Paint and Coatings, Paper Chemical, Raw material for chemical processes, Raw material for industry
Company Sasol Chemicals (USA) LLC
(an affiliate of Sasol Chemicals North America LLC)
Address 12120 Wickchester Lane  Houston TX 77079
Telephone CHEMTREC North America Transportation Emergency (24-hr) (800) 424-9300
CHEMTREC World Wide (703) 527-3887
Other Emergencies (24-hr) (337) 494-5142
SDS and Product Information (8:00am-4:30pm CST) (281) 588-3491
Health and Safety Information (7:30am-4:00pm CST) (281) 588-3492
E-mail address SasolElectronicSDS@us.sasol.com

SECTION 2 HAZARDS IDENTIFICATION

GHS Hazards
- Flammable liquids Category 2
- Acute toxicity (Oral) Category 4
- Acute toxicity (Inhalation) Category 3
- Acute toxicity (Dermal) Category 4
- Carcinogenicity Category 2
- Eye irritation Category 2A
- Skin irritation Category 2
- Skin sensitisation Category 1
- Specific target organ toxicity - single exposure Category 3 (Resp. irritation)
- Chronic aquatic toxicity Category 3

LABEL ELEMENTS

Hazard symbols

Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
SAFETY DATA SHEET

Ethyl Acrylate

H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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/protective clothing/eye protection/face protection.
P233 Keep container tightly closed.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.

Response
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
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.
P311 Call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

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

Disposal
P501 Dispose of contents/container to an approved waste disposal plant.

Additional advice
Possible/probable human carcinogen
**Ethyl Acrylate**

**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 Acrylate</td>
<td>140-88-5</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. Get medical attention immediately.
- **Inhalation**: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
- **Ingestion**: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**SECTION 5  FIREFIGHTING MEASURES**

**FLAMMABLE PROPERTIES**

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

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

- **Protective equipment and precautions for firefighters**: Wear self-contained breathing apparatus and protective suit.

- **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.

- **Spill precautions**: 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  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 and gloves.

Inhalation  Always wear a self-contained breathing apparatus or full-face airline respirator when using this chemical.

EXPOSURE GUIDELINES

Components  Exposure limit(s)

Ethyl Acrylate  OSHA PEL 25 ppm 100 mg/m3

ACGIH TLV (8-hour) 5 ppm

ACGIH STEL 15 ppm

PEL= Permissible Exposure Limits  TWA= Time Weighted Average (8 hr.)

TLV= Threshold Limit Value  STEL= Short Term Exposure Limit (15 min.)

EL= Excursion Limit  WEEL= Workplace Environmental Exposure Level

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

Appearance  liquid;

Colour  Clear, colorless

Form  liquid

Odour  unpleasant

Odour Threshold  no data available

Flash point  9 °C, 48 °F;
Ethyl Acrylate

Flammability
- Upper explosion limit: 13 %\,(V)
- Lower explosion limit: 1.7 %\,(V)

Boiling point/boiling range
- 99.8 °C, 211.6 °F;

Melting point/range
- -71.2 °C, -96.2 °F;

Auto-ignition temperature
- 372 °C, 702 °F;

Decomposition temperature
- no data available

Flammability (solid, gas)
- no data available

Vapour pressure
- 40 hPa \, @ 21 °C, 70 °F;

Vapour density
- no data available

Density
- 0.92 g/cm3 \, @ 20 °C, 68 °F;

Specific gravity
- no data available

Water solubility
- slightly soluble

Viscosity
- no data available

Viscosity, dynamic
- 0.54 mPa.s \, @ 25 °C, 77 °F;

pH
- no data available

Evaporation rate
- no data available

Partition coefficient: n-octanol/water
- log Pow: 1.18 \, @ 25 °C, 77 °F;

SECTION 10 STABILITY AND REACTIVITY

Reactivity
- The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution.

Chemical stability
- Ensure good distribution of the inhibitor and dissolved oxygen. Please take note of the product's maximum storage period.

Conditions to avoid
- Avoid temperatures above 35°C, direct sunlight and contact with sources of heat. Avoid radical-forming starting agents, peroxides and reactive metals. Protect from contamination.
Ethyl Acrylate

Hazardous decomposition products
No decomposition if stored normally. Prolonged storage of the product can cause the stabiliser to lose its effectiveness.

Materials to avoid
Oxidizing agents
Heavy metal salts
Acids and bases
Acid anhydrides
polymerisation initiators

Hazardous polymerisation
Hazardous polymerization may occur upon depletion of inhibitor - may cause heat and pressure build-up in closed containers.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute dermal toxicity
LD50 Rabbit: > 1,000 - 2,000 mg/kg (literature value)

Acute inhalation toxicity
LC50 Rat (4 hours): > 2 - 10 mg/l; OECD Test Guideline 403 (literature value)

Acute oral toxicity
LD50 Rat: > 300 - 2,000 mg/kg (literature value)

Skin corrosion/irritation
(Rabbit): OECD Test Guideline 404 irritating, (literature value)

Eye damage/irritation
(Rabbit) irritating, (literature value)

Respiratory or skin sensitization
human skin: Causes sensitisation; Maximisation Test (literature value)

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
Ethyl Acrylate

Assessment teratogenicity: no data available

STOT - single exposure
The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure no data available

Aspiration toxicity no data available

Carcinogenicity Assesment carcinogenicity: Suspected of causing cancer.

Carcinogenicity ratings
Ethyl Acrylate IARC Possible human carcinogen

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity Harmful to aquatic life with long lasting effects.

Toxicity to fish LC50 (Cyprinodon variegatus (sheepshead minnow)): > 1 - 10 mg/l; flow-through test; OECD Test Guideline 203 (literature value)

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 48 hours: > 1 - 10 mg/l (literature value)

Toxicity to algae EC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 1 - 10 mg/l (literature value)

Chronic toxicity to aquatic invertebrates NOEC (Daphnia magna (Water flea)) 21 d: > 0.1 - 1 mg/l; semi-static test; OECD Test Guideline 211 (literature value)

Biodegradation Readily biodegradable

OECD Test Guideline 310 (28 d): > 60 % (literature value)

Bioaccumulation no data available

Mobility in soil no data available

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

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Code U113.D001 - Ignitability (RQ 100 LB). 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.

SECTION 14 TRANSPORT INFORMATION

DOT UN 1917, Ethyl acrylate, stabilized, 3, II When shipped in quantities greater than 1,000 lbs, RQ must be added to the shipping description.

IATA UN 1917, Ethyl acrylate, stabilized, 3, II When shipped in quantities greater than 1,000 lbs, RQ must be added to the shipping description.

IMDG UN 1917, Ethyl acrylate, stabilized, 3, II When shipped in quantities greater than 1,000 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

OSHA Hazards (HCS 1994) Flammable liquid, Irritant, Sensitiser

TSCA Inventory Listing Components 2-Propenoic acid, ethyl ester CAS-No. 140-88-5

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", "Delayed (chronic) health hazard"
Ethyl Acrylate

SARA 313 Chemical Components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-88-5</td>
<td>100 %</td>
</tr>
</tbody>
</table>

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components

<table>
<thead>
<tr>
<th>Reportable Quantity</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 LB</td>
<td>100 %</td>
</tr>
</tbody>
</table>

INTERNATIONAL REGULATIONS

WHMIS Classification
Class B, Division 2: Flammable liquid.
Class D, Division 2, Subdivision A: Very toxic material
Class D, Division 2, Subdivision B: Toxic material.

European Union
Classification according to Regulation (EU) 1272/2008.

- Flammable liquids, Category 2
- Acute toxicity (Dermal), Category 4
- Acute toxicity (Inhalation), Category 3
- Acute toxicity (Oral), Category 4
- Carcinogenicity, Category 2
- Skin irritation, Category 2
- Eye irritation, Category 2
- Skin sensitisation, Category 1
- Specific target organ toxicity - single exposure, Category 3 (Resp. irritation)
- Chronic aquatic toxicity, Category 3

- 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
2-Propenoic acid, ethyl ester  CAS-No. 140-88-5

SECTION 16  OTHER INFORMATION

HAZARD RATINGS

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

THE DATA AND INFORMATION CONTAINED HEREIN ARE BEING FURNISHED FOR INFORMATIONAL PURPOSES ONLY, UPON THE EXPRESS CONDITION THAT EACH CUSTOMER SHALL MAKE ITS OWN ASSESSMENT OF APPROPRIATE USE AND APPROPRIATE SHIPPING, TRANSFER AND STORAGE MATERIALS AND PROCEDURES FOR SASOL CHEMICALS (USA) LLC'S PRODUCTS. ALTHOUGH BASED ON INFORMATION SOURCES WHICH SASOL CHEMICALS (USA) LLC CONSIDERS ACCURATE AND RELIABLE, SASOL CHEMICALS (USA) LLC MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDING THE VALIDITY OF THIS INFORMATION, THE INFORMATION SOURCES UPON WHICH THE SAME ARE BASED, OR THE RESULTS TO BE OBTAINED, AND EXPRESSLY DISCLAIMS LIABILITIES FOR DAMAGES OR INJURIES RESULTING FROM THE USE THEREOF.