

Safety data sheet as per Commission Regulation (EU) 2015/830

Product: Ethyl acrylate



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

| | |
|---------------|--------------------|
| Trade name | Ethyl acrylate/ EA |
| Chemical Name | Ethyl 2-propenoate |
| CAS Number | 140-88-5 |
| EC Number | 205-438-8 |

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Used as a monomer for preparation of polymers used in resins, adhesives, lacquers and or the preparation of flocculants for sewage clarification and paper production; as a raw material in synthesis of pharmaceutical intermediates

Uses identified against Not for use other than those specified

1.3 Details of the supplier of the safety data sheet:

| | |
|----------------|---|
| Manufacturer | Prasol Chemicals Pvt. Ltd., Prasol House, Plot No.A-17/2/3, T.T.C. Indl. Area, Khairne M.I.D.C., Navi Mumbai - 400 710. Maharashtra, India. |
| Telephone | +91-22-27782555 |
| Telefax | +91-22-27782430 |
| e-mail address | sales@prasolchem.com; inquiry@prasolchem.com |

1.4 Emergency telephone number

| | |
|-----------|------------------|
| Telephone | +91-22- 27782555 |
| Language | English |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

| | | | |
|---|------------|------|--|
| Flammable liquid | Category 2 | H225 | Highly flammable liquid and vapour |
| Acute Toxicity, oral | Category 4 | H302 | Harmful if swallowed |
| Acute Toxicity, dermal | Category 4 | H312 | Harmful in contact with skin |
| Skin Irritation | Category 2 | H315 | Causes skin irritation |
| Skin Sensitization | Category 1 | H317 | May cause an allergic skin reaction |
| Eye Irritation | Category 2 | H319 | Causes serious eye irritation. |
| Acute Toxicity, inhalation | Category 3 | H331 | Toxic if inhaled |
| Specific Target Organ Toxicity, Single exposure | Category 3 | H335 | May cause respiratory irritation |
| Aquatic Chronic Toxicity | Category 3 | H412 | Harmful to aquatic life with long lasting effects. |

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



GHS02
Danger



GHS06

Signal word

Hazard statements

| | |
|------|--|
| H225 | Highly flammable liquid and vapour |
| H302 | Harmful if swallowed |
| 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 |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statements

| | | |
|-------------------|------|--|
| General | P103 | Read label before use |
| Prevention | P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. |

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| | | |
|-----------------|-----------------|---|
| | | No smoking. |
| | P233 | Keep container tightly closed. |
| | P240 | Ground and bond container and receiving equipment. |
| | P241 | Use explosion-proof equipment. |
| | P242 | Use non-sparking tools. |
| | P243 | Take action to prevent static discharges. |
| | P261 | Avoid breathing gas/vapours/spray. |
| | P264 | Wash thoroughly after handling. |
| | P270 | Do not eat, drink or smoke when using this product. |
| | P271 | Use only outdoors or in a well-ventilated area. |
| | P272 | Contaminated work clothing should not be allowed out of the workplace. |
| | P273 | Avoid release to the environment. |
| | P280 | Use protective gloves and eye protection. |
| Response | P301+P312 | IF SWALLOWED: Call a doctor if you feel unwell. |
| | P303+P361+ P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| | P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing |
| | P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| | P311 | Call a doctor. |
| | P321 | Specific treatment- wash with mild soap and water. |
| | P330 | Rinse mouth. |
| | P332 + P313 | If skin irritation occurs: Get medical attention |
| | P337 + P313 | If eye irritation persists: Get medical attention. |
| | P362 + P364 | Take off contaminated clothing and wash it before reuse. |
| | P370+P378 | In case of fire: Use CO ₂ , dry powder, foam or water spray to extinguish |
| Storage | P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| | P403+P235 | Store in a well-ventilated place. Keep cool. |
| | P405 | Store locked up. |
| Disposal | P501 | Dispose of contents and container in accordance with national regulations |

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of REACH regulation

SECTION 3: Composition/information on ingredients

3.1 Substances

| | Ingredient | CAS No. | EC No. | Concentration (%) |
|--------------------------------|-------------------|--|---------------|--------------------------|
| | Ethyl acrylate | 140-88-5 | 205-438-8 | 99 min |
| Additional information: | | | | |
| | Molecular Formula | C ₅ H ₈ O ₂ | | |
| | Molecular Weight | 100.12 | | |

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off all contaminated clothing immediately.

After inhalation

Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

After skin contact

Immediately wash skin with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention without delay. Wash clothing before reuse. Destroy contaminated articles such as shoes.

After eye contact

Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

After swallowing

Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms

Eye and skin irritation



- and effects, both acute and delayed
- 4.3 Indication of any immediate medical attention and special treatment needed**
- Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture.
Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done.
Respiratory symptoms, including pulmonary edema, may be delayed.
Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress.
Maintain adequate ventilation and oxygenation of the patient.
Chemical eye burns may require extended irrigation.
Obtain prompt consultation, preferably from an ophthalmologist.
If burn is present, treat as any thermal burn, after decontamination.
No specific antidote.
Treat symptomatically.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
- Suitable extinguishing media** CO₂, dry powder, foam or water spray; Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
- Unsuitable extinguishing media** water jet
- 5.2 Special hazards arising from the substance or mixture** May form toxic carbon oxides if case of fire; Flammable. Container may vent and/or rupture due to fire. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point.
- 5.3 Advice for firefighters** Use fine water spray to cool endangered containers.
Move undamaged containers from immediate hazard area.
Do not allow fire water to penetrate into surface or ground water.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures** Wear a self-contained breathing apparatus and chemical protective clothing.
Evacuate area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area.
Vapor explosion hazard.
- 6.2 Environmental precautions** Material may float on water and any runoff may create an explosion or fire hazard if ignited. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
Do not allow to enter drains, surface waters, basements or pits.
- 6.3 Methods and material for containment and cleaning up** In case of spills of large quantities: Dam spills and pump to remove. Absorb leftover product with non-flammable liquid-binding material (e.g. earth, sand, vermiculite or ground sand stone) and place in closed containers for disposal. Pump with explosion-proof equipment. If available, use foam to smother or suppress.
- 6.4 Reference to other sections** Section 8 for information on personal protection equipment.
Section 13 for disposal information

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling** Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Wash thoroughly after



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| | handling. Keep container closed. Use with adequate ventilation. Never use air pressure for transferring product. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Electrically bond and ground all containers and equipment before transfer or use of material. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. |
| 7.2 Conditions for safe storage, including any incompatibilities | |
| Advice on protection against fire and explosion | Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Store in a dry place. Store away from direct sunlight or ultraviolet light. Store away from incompatible materials. Maintain inhibitor and dissolved oxygen level. Do not purge containers of this material with nitrogen. Recommended inhibitor level is: 10 to 20 ppm. Recommended oxygen level is: 5 to 8 vol. %. |
| Storage | Uninhibited monomer vapors can polymerize and plug relief devices. Storage Shelf life: Use within 12 Months; Storage temperature: < 38 °C |
| Advice on common storage | Observe prohibition against storing together! |
| Storage class | Combustible liquid |
| Storage stability | Stable under recommended storage conditions |
| 7.3 Specific end use(s) | Refer Section 1 General Handling |

SECTION 8: Exposure controls/personal protection

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| 8.1 Control parameters | ACGIH (TLV)-TWA 5ppm, 20mg/m ³ (TLV)-STEL 15ppm, 61mg/m ³ OSHA (PEL)-TWA 25ppm, 100mg/m ³ , Skin |
| 8.2 Exposure controls | |
| Appropriate engineering controls | Provide good ventilation and/or an exhaust system in the work area. |
| Personal protective equipment | |
| Eye/ face protection | closed goggles, face shield |
| Skin protection | |
| Hand protection | Preferred glove materials: Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol laminate ("EVAL"), Polyvinyl alcohol ("PVA"), Styrene/butadiene rubber. Acceptable glove barrier materials: Butyl rubber, Nitrile/butadiene rubber ("nitrile" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Neoprene. |
| Body protection | Use solvent-resistant protective clothing. Flame-retardant antistatic protective clothing; safety shoes |
| Respiratory protection | Respiratory equipment with suitable filter or a self-contained respiratory apparatus. |
| Thermal hazards | Flammable liquid; do not expose to heat |
| Industrial hygiene | Do not inhale vapours / aerosols. Avoid contact with skin and eyes. Remove immediately all contaminated clothing. Use disposable clothing if appropriate. Smoking, eating and drinking should be prohibited in the application area. |

SECTION 9: Physical and chemical properties

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| 9.1 Information on basic physical and chemical properties | |
| Appearance | clear liquid |
| Odour | acid smell |
| Odour threshold | 0.2-1.3 ppb |
| pH | no data |
| Melting point | -71°C |
| Boiling point | 99.8°C |



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|----------------------------------|--|
| Flash point | 9°C (Closed cup) |
| Evaporation rate | 3.3 (nBuAc=1) |
| Flammability (solid, gas) | not applicable |
| Flammability limits | no data |
| | Lower 1.4% |
| | Upper 14% |
| Vapour pressure | 40hPa at 20°C |
| Vapour density | 3.45 (air =1 at boiling point) |
| Relative density | 0.92 at 20°C |
| Solubility in water | 20g/L at 20°C |
| Partition coefficient | 1.18 log Kow (n-octanol/water) at 25°C |
| Ignition temperature | 372°C |
| Decomposition temperature | no data available |
| Viscosity at 25°C | 0.54mPa.s |
| Explosive properties | No explosive properties. |
| Oxidizing properties | No oxidizing properties |
| 9.2 Other information | |
| Heat of combustion | -2744 kcal/g·mol |
| Heat of vaporization | 34.62 cal/g·mol |

SECTION 10: Stability and reactivity

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| 10.1 Reactivity | No special reactivity |
| 10.2 Chemical stability | Stable under recommended storage conditions. Unstable at elevated temperatures. Hygroscopic. Inhibitor: Mequinol; 4-methoxyphenol; hydroquinone monomethyl ether. Inhibitor Concentration (ppm): 10 - 990 |
| 10.3 Possibility of hazardous reactions | Hazardous Polymerization: Can occur. Elevated temperatures can cause hazardous polymerization. Maintain inhibitor and dissolved oxygen level. Do not purge containers of this material with nitrogen. Polymerization can be catalyzed by: Absence of air. Free radical initiators. High temperature. Peroxides. Presence of water can accelerate rate of polymerization. Uninhibited monomer vapors can polymerize and plug relief devices. |
| 10.4 Conditions to avoid | Avoid temperatures above 38°C (100°F) Exposure to elevated temperatures can cause product to decompose. Avoid static discharge. Avoid moisture. Do not blanket or purge with an inert gas to avoid depleting the oxygen concentration. Avoid direct sunlight or ultraviolet. |
| 10.5 Incompatible materials | Avoid contact with oxidizing materials. Avoid contact with: Aldehydes. Amines. Azides. Ethers. Free radical initiators. Halides. Mercaptans. Mineral acids. Peroxides. Strong inorganic bases. Avoid contact with metals such as: Brass. Copper. Avoid unintended contact with: Activated carbon. Avoid contact with absorbent materials such as: Clay-based absorbents. Aluminum oxide. Silica gel. Avoid unintended contact with peroxides. |
| 10.6 Hazardous decomposition products | Thermal decomposition products- carbon oxides Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids. Decomposition products depend upon temperature, air supply and the presence of other materials |

SECTION 11: Toxicological information

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| 11.1 Information on toxicological effects | |
| Acute toxicity | |
| LD50 oral rat | 1120 mg/kg bw |
| LC50 inhalation 4h, rat | <9.137ppm |
| LD50 Dermal rabbit | 3049 mg/kg bw |
| Skin irritation | irritating 24 h (rabbit) |
| Serious eye irritation | Irritating - 24 h (rabbit) |
| Respiratory or skin sensitization | skin sensitizer |

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| Germ cell mutagenicity | non mutagenic (Ames test) |
| Carcinogenicity | no indications for a carcinogenic potential |
| Reproductive toxicity | no adverse effect on reproduction (rat) |
| STOT-single exposure | irritating to skin; Category 2 |
| STOT-repeated exposure | NOAEC 25ppm, 90d, respiratory tract |
| Aspiration hazard | no data available |

SECTION 12: Ecological information

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|--|---|
| 12.1 Toxicity | |
| Aquatic toxicity | |
| Toxicity to fish | LC50 96h 4.6mg/L <i>Oncorhynchus mykiss</i> |
| Toxicity to aquatic invertebrates | EC50 48h 7.9mg/L <i>Daphnia magna</i> |
| Toxicity to aquatic algae and cyanobacteria | EC50 96h 11mg/L <i>Pseudokirchneriella subcapitata</i> |
| Toxicity to microorganisms | EC10 72h >100mg/L activated sludge |
| 12.2 Persistence and degradability | |
| Biodegradation | readily biodegradable (>60% in 28days) |
| 12.3 Bioaccumulative potential | log BCF 0.316, log Pow 1.32 |
| 12.4 Mobility in soil | high mobility for desorption from soils |
| 12.5 Results of PBT and vPvB assessment | Not a PBT, vPvB substance according to the REACH regulation |
| 12.6 Other adverse effects | No further information available |

SECTION 13: Disposal considerations

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|-------------------------------------|---|
| 13.1 Waste treatment methods | Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Do not dispose in sewage. |
|-------------------------------------|---|

SECTION 14: Transport information

| | ADR/RID | IMDG | ICAO/IATA |
|---|---|-------------|------------------|
| 14.1 UN Number | 1917 | 1917 | 1917 |
| 14.2 UN proper shipping name | ETHYL ACRYLATE, STABILIZED | | |
| 14.3 Transport hazard class | 3 | 3 | 3 |
| 14.4 Packaging group | II | III | III |
| 14.5 Environmental hazards | not environmentally hazardous, not a marine pollutant | | |
| 14.6 Special precautions for the user | Flammable liquids (class 3) | | |
| EmS Number | F-E, S-D | | |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | See regulatory information for transport approval | | |

SECTION 15: Regulatory information

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|--|--|
| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| Major accident hazard | Seveso III P5a/ P5b/ P5c Flammable liquids |
| International Chemical Inventory Status | |
| USA (TSCA) | listed |
| Canada (DSL) | listed |
| Australia (AICS) | listed |
| Japan (MITI) | listed |
| Korea (KECL) | listed |
| Philippines (PICCS) | listed |
| China | listed |
| New Zealand | listed |
| Taiwan | listed |
| 15.2 Chemical safety assessment | A Chemical Safety Assessment will be carried out at the time of REACH registration |

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Further information:

Sections in which changes have been made since the last version are marked with a diamond ◆ in the left hand margin.

Abbreviations and acronyms in English language:

| | |
|--------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| AICS | Australian Inventory of Chemical Substances |
| CAS | Chemical Abstracts Service (division of the American Chemical Society) |
| CLP | Classification for Labeling and Packaging |
| DSL | Domestic Substances List |
| EC | European Commission |
| EC50 | Half maximal effective concentration |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| GHS | Globally Harmonized System of Classification and Labeling of Chemicals |
| IATA | International Air Transport Association |
| IBC | International Bulk Chemical |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Code for Dangerous Goods |
| KECL | Korea Existing Chemicals List |
| KOC | Soil adsorption coefficient |
| KOW | Partition Coefficient octanol-water |
| LC50 | Lethal concentration, 50 percent |
| LD50 | Lethal dose, 50 percent |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| MITI | Ministry of International Trade and Industry |
| NOAEL | No Observed Adverse Effect Level |
| PBT | Persistent, bioaccumulative and toxic substances |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances |
| RID | Regulations Concerning the International Transport of Dangerous Goods by Rail |
| STOT | Specific target organ toxicity |
| TSCA | Toxic Substances Control Act |
| UN | United Nations |
| vPVB | (very) Persistent, (very) Bioaccumulative |

Sources

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

| | |
|--------|---|
| ECHA | https://echa.europa.eu/registration-dossier/-/registered-dossier/15431/1 |
| Chemid | https://chem.nlm.nih.gov/chemidplus/rn/140-88-5 |
| Inchem | http://www.inchem.org/documents/icsc/icsc/eics0607.htm |
| CDC | https://www.cdc.gov/niosh/ipcsneng/neng0267.html |
