

## Ethyl Acrylate



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## 1. identification

### A. Product name

- ETHYL ACRYLATE BULK [EAB]s

### B. Recommended use and restriction on use

- General use : Textiles Sizing Agents, Paint & Ink, Adhesive, Flexible Resin, Felt Bonding Agent
- Restriction on use : Not available

### C. Manufacturer / Supplier / Distributor information

#### ○ Supplier information

- Supplier : GODO CHEMICAL Corporation
- Address : #1017, 10F Suseo Hyundai Ventureville 10 Bamgogae-ro 1-gil Gangnam-gu Seoul  
06349 Korea
- Telephone : (82)2 417 2555~6
- Email : godochem@godochem.com

## 2. hazard identification

### A. GHS Classification

- Flammable liquids : Category2
- Acute toxicity (oral) : Category4
- Acute toxicity (dermal) : Category4
- Acute toxicity (inhalation: vapor) : Category3
- Skin corrosion/irritation : Category1B
- Serious eye damage/irritation : Category1
- Skin sensitization : Category1
- Carcinogenicity : Category2
- Specific target organ toxicity(Single exposure) : Category1
- Specific target organ toxicity(Single exposure) : Category3(Narcotic effects)
- Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)
- Specific target organ toxicity(Repeated exposure) : Category1
- Acute aquatic toxicity : Category2

### B. GHS label elements

#### ○ Hazard symbols



#### ○ Signal words

- Danger

#### ○ Hazard statements

- H225 Highly flammable liquid and vapour
- H302 Harmful if swallowed
- H312 Harmful in contact with skin

## Ethyl Acrylate



GODO CHEMICAL

- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H331 Toxic if inhaled
- H335 May cause respiratory irritation
- H336 May cause drowsiness and dizziness.
- H351 Suspected of causing cancer
- H370 Causes damage to organs(Refer Section SDS 11)
- H372 Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- H401 Toxic to aquatic organisms.

## ○ Precautionary statements

## 1) 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.
- 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. Flammable liquids (chapter 2.6) 1, 2, 3
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe gas/mist/vapours/spray.
- P261 Avoid breathing gas/mist/vapours/spray.
- P264 Wash hands 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 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

## 2) Response

- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.  
Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

- P307+P311 If exposed: Call a POISON CENTER or doctor/physician.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P310 Immediately call a POISON CENTER or doctor/physician.

## Ethyl Acrylate



GODO CHEMICAL

- P311 Call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment
- P330 Rinse mouth.- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

## 3) 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.

## 4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

## C. Other hazards which do not result in classification : (NFPA Classification)

○ NFPA grade (0 ~ 4 level)

- Health : 2 , Flammability : 3, Reactivity : 2

## 3. composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
2-Propenoic acid ethyl ester	Ethyl acrylate	140-88-5	99.5

## 4. first aid measures

## A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

## B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Prevent the spread of the skin.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Wash thoroughly after handling

## C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Take the doctor's examination.

## Ethyl Acrylate



GODO CHEMICAL

## D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

## E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

## F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

**5. fire fighting measures**

## A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

## B. Specific hazards arising from the chemical

- Not available

## C. Special protective actions for firefighters

- Keep unauthorized personnel out.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Using a unattended and water devices in case of large fire and leave alone to burn if you do not imperative.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.
- Due to the extremely low flash point, irrigating fire extinguishing may be less effective when put out a fire.

**6. additional release measures**

## A. Personal precautions, protective equipment and emergency procedures

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

## B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

## C. Methods and materials for containment and cleaning up

## Ethyl Acrylate



GODO CHEMICAL

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption
- Wipe off the solvent.
- Dike for later disposal.
- Do not use plastic containers.

## 7. handling and storage

### A. Precautions for safe handling

- Wash thoroughly after handling.
- Avoid contact with incompatible materials
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources.
- Contaminated work clothing should not be allowed out of the workplace.

### B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not use damaged containers.
- Save applicable laws and regulations.
- Avoid direct sunlight.
- Keep in the original container.
- By specifying a storage area for carcinogenic substances.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product.

## 8. exposure controls/personal protection

### A. Exposure limits

- ACGIH TLV
  - [2-Propenoic acid ethyl ester] : TWA, 5 ppm (21 mg/m<sup>3</sup>) STEL, 15 ppm (61 mg/m<sup>3</sup>)
- OSHA PEL
  - [2-Propenoic acid ethyl ester]:25ppm 100mg/m<sup>3</sup>

### B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

## Ethyl Acrylate



GODO CHEMICAL

## C. Individual protection measures, such as personal protective equipment

## ○ Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

## ○ Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

## ○ Hand protection

- Wear appropriate chemical resistant glove.

## ○ Skin protection

- Wear appropriate chemical resistant protective clothing.

## ○ Others

- Not available

## 9. physical and chemical properties

A. Appearance	
- Appearance	Liquid
- Color	Colorless
B. Odor	Pungent
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	-71 °C
F. Initial Boiling Point/Boiling Ranges	99 °C
G. Flash point	8 °C
H. Evaporation rate	3.3
I. Flammability(solid, gas)	highly flammable
J. Upper/Lower Flammability or explosive limits	14 / 1.4 %
K. Vapour pressure	3.9 kPa (20°C)
L. Solubility	1.5 g/100ml (20°C (Soluble: alcohol, ester, chloroform, organic solvent))
M. Vapour density	3.45
N. Specific gravity(Relative density)	0.92
O. Partition coefficient of n-octanol/water	1.32
P. Autoignition temperature	345 °C
Q. Decomposition temperature	Not available
R. Viscosity	0.56cp (25 °C)
S. Molecular weight	100.12

## Ethyl Acrylate



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**10. stability and reactivity**

## A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

## B. Possibility of hazardous reactions

- Cylinders exposed to fire may vent and release flammable gas.

## C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

## D. Incompatible materials

- Not available

## E. Hazardous decomposition products

- May emit flammable vapour if involved in fire

**11. toxicological information**

## A. Information on the likely routes of exposure

 (Respiratory tracts)

- May cause respiratory irritation.

 (Oral)

- Harmful if swallowed

 (Eye·Skin)

- Causes serious eye damage
- Causes severe skin burns and eye damage
- May cause an allergic skin reaction

## B. Delayed and immediate effects and also chronic effects from short and long term exposure

 Acute toxicity

## \* Oral

- [2-Propenoic acid ethyl ester] : LD50 = 800 mg/kg Rat (NLM)

## \* Dermal

- [2-Propenoic acid ethyl ester] : LD50 = 1790 mg/kg rabbit (ACGIH)

## \* Inhalation

- [2-Propenoic acid ethyl ester] : LC50 = 5.78 mg/L 4 hr Rat (NITE)

 Skin corrosion/irritation

- Causes severe skin burns and eye damage

 Serious eye damage/irritation

- Causes serious eye damage

 Respiratory sensitization

- Not available

 Skin sensitization

- May cause an allergic skin reaction

 Carcinogenicity

## \* IARC

- [2-Propenoic acid ethyl ester] : Group 2B

## Ethyl Acrylate



GODO CHEMICAL

- \* OSHA
  - Not available
- \* ACGIH
  - [2-Propenoic acid ethyl ester] : A4
- \* NTP
  - Not available
- \* EU CLP
  - Not available
- Germ cell mutagenicity
  - Not available
- Reproductive toxicity
  - Not available
- STOT-single exposure
  - Causes damage to organs(Refer Section SDS 11)
  - May cause drowsiness and dizziness.
  - May cause respiratory irritation.
- STOT-repeated exposure
  - Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- Aspiration hazard
  - Not available

## 12. ecological information

### A. Ecotoxicity

- Fish
  - [2-Propenoic acid ethyl ester] : LC50 = 1.16 mg/L 96 hr (CERI·NITE 유해성 평가서 (2004))
- Crustaceans
  - [2-Propenoic acid ethyl ester] : LC50 = 12 mg/L 24 hr
- Algae
  - Not available

### B. Persistence and degradability

- Persistence
  - [2-Propenoic acid ethyl ester] : log Kow 1.32 (ICSC)
- Degradability
  - Not available

### C. Bioaccumulative potential

- Bioaccumulative potential
  - Not available
- Biodegradation
  - [2-Propenoic acid ethyl ester] : Biodegradability = 92.6 (%) (existing chemical safety inspections data)

### D. Mobility in soil

- [2-Propenoic acid ethyl ester] : log Kow = 1.32 (12)

### E. Other adverse effects

- Not available



## Ethyl Acrylate



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**13. disposal considerations**

## A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- Make sure to incinerate completely
- Incinerating of residues after treatment, purified by means of Separation•distillation•extractio•filtration•pyrolysis
- Do incineration of the residue after disposal as the method of evaporation and concentration.
- Do disposal using the reaction of neutralization, oxidation-reduction, polymerization and condensation.
- Do incineration of the residue, or do incineration of the residue after re-disposal as the method of agglomeration, precipitation, filtration and dehydration.
- Do disposal as the method of evaporation and concentration.

## B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

**14. transport information**

## A. UN No. (IMDG)

- 1917

## B. Proper shipping name

- ETHYL ACRYLATE, STABILIZED

## C. Hazard Class

- 3

## D. IMDG Packing group

- II

## E. Marine pollutant

- Not available
- Not applicable

## F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- Air transport(IATA): Not subject to LATA regulations.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-D (Flammable liquids)
- Self Accelerating Polymerization Temperature (SAPT) : 60°C

**15. regulatory information**

## Ethyl Acrylate



GODO CHEMICAL

## A. National and/or international regulatory information

- POPs Management Law
  - Not applicable
- Information of EU Classification
  - \* Classification
    - [2-Propenoic acid ethyl ester] : F; R11 Xn; R20/21/22 Xi; R36/37/38 R43
  - \* Risk Phrases
    - [2-Propenoic acid ethyl ester] : R11, R20/21/22, R36/37/38, R43
  - \* Safety Phrase
    - [2-Propenoic acid ethyl ester] : S2, S9, S16, S33, S36/37
- U.S. Federal regulations
  - \* OSHA PROCESS SAFETY (29CFR1910.119)
    - Not applicable
  - \* CERCLA Section 103 (40CFR302.4)
    - [2-Propenoic acid ethyl ester] : 453.599 kg 1000 lb
  - \* EPCRA Section 302 (40CFR355.30)
    - Not applicable
  - \* EPCRA Section 304 (40CFR355.40)
    - Not applicable
  - \* EPCRA Section 313 (40CFR372.65)
    - [2-Propenoic acid ethyl ester] : Applicable
- Rotterdam Convention listed ingredients
  - Not applicable
- Stockholm Convention listed ingredients
  - Not applicable
- Montreal Protocol listed ingredients
  - Not applicable

**16. other information**

## A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained hereins

- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

## B. Issue date

- 2016-01-20

## C. Revision number and Last date revised

- 1 times, 2017-11-22

## D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).