

Safety Data Sheet

ETHYL ACRYLATE

Revision date : 2021/08/12
Version: 3.0

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(30041302/SDS_GEN_CA/EN)

1. Identification

Product identifier used on the label

ETHYL ACRYLATE

Recommended use of the chemical and restriction on use

Recommended use*: Monomer.

Recommended use*: Monomer.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF Canada Inc.
5025 Creekbank Road
Building A, Floor 2
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Molecular formula:

C5 H8 O2

Synonyms:

Acrylic Acid, Ethyl Ester.

Use: Monomer

Ethyl 2-Propenoate; 2-Propenoic Acid, Ethyl Ester

Acrylic Acid, Ethyl Ester

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

Flam. Liq.

2

Flammable liquids

Acute Tox.

3 (Inhalation - vapour)

Acute toxicity

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Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Skin Sens.	1B	Skin sensitization
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection or face protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe mist or vapour.
P243	Take action to prevent static discharges.
P273	Avoid release to the environment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash contaminated body parts thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P242	Use only non-sparking tools.
P240	Ground and bond container and receiving equipment.

Precautionary Statements (Response):

P311	Call a POISON CENTER or physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Remove or Take off immediately all contaminated clothing. Rinse skin with water or shower.
P330	Rinse mouth
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire, ... to extinguish.

Precautionary Statements (Storage):

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P403 + P235	Store in a well-ventilated place. Keep cool.
P233	Keep container tightly closed.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture. See section 12 - Results of PBT and vPvB assessment.

Labeling of special preparations (GHS):

Risk of hazardous polymerization under certain conditions (e.g. elevated temperatures, low inhibitor and oxygen concentration).

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

ethyl acrylate

CAS Number: 140-88-5

Content (W/W): ≥ 99.0 - $\leq 100.0\%$

Synonym: 2-Propenoic acid ethyl ester; Ethyl acrylate

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

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Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
carbon dioxide, dry powder, water spray, foam

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Risk of violent self-polymerization if overheated in a container.

Advice for fire-fighters

Further information:

In case of a fire in the vicinity a restabilization system should be used if the temperature in the storage container reaches 45°C. Evacuate area of all unnecessary personnel. In case of a fire in the vicinity evacuate all personnel in a greater area if the temperature in the storage container reaches 60°C.

Impact Sensitivity:

Remarks:

Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures.

Ensure adequate ventilation. Use personal protective clothing. Breathing protection required.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Spills should be contained, solidified, and placed in suitable containers for disposal. Use spark-proof tools and explosion-proof equipment.

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7. Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. The substance/ product may be handled only by appropriately trained personnel. Facility parts must be checked for polymer residues and cleaned on regular basis in order to avoid hazardous reactions.

Ensure thorough ventilation of stores and work areas. Encapsulation or exhaust ventilation required. When filling, transferring, or emptying of containers, adequate local exhaust ventilation is necessary. Vent waste air to atmosphere only through suitable separators. Check the condition of seals and connector screw threads. Do not open warm or swollen product containers. Remove persons to safety and alert fire brigade.

The temperatures which must be avoided are to be considered. Protect against heat. Protect from direct sunlight. Protect contents from the effects of light.

Ensure adequate inhibitor and dissolved oxygen level.

Protection against fire and explosion:
Substance/product is a flammable liquid.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Prior to storage ensure that the transfer equipment used and the intended storage containers do not contain other substances/products. Before transfer to stock the identity of the product must be proved to be without doubt. The entrance to storage rooms is to be granted only to appropriately trained personnel.

The stabilizer is only effective in the presence of oxygen. Maintain contact with atmosphere containing 5 - 21% oxygen. Never use tanks with inert-gas installation for storage.

Risk of polymerization. Protect against heat. Protect from direct sunlight. Protect against contamination.

All storage containers should at least be equipped with two high temperature alert devices. Even if the product is stored and handled as prescribed/indicated it should be used up within the indicated duration of storage.

Storage stability:

Storage temperature: < 35 °C

Storage duration: 12 Months

The stated storage temperature should be noted.

Avoid prolonged storage.

Storage temperature: 45 °C

A restabilization system should be used if the temperature in the storage container reaches the indicated value.

Storage temperature: 60 °C

All personnel in a greater area should be evacuated if the temperature in the storage container reaches the indicated value.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

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ethyl acrylate	ACGIH, US:	STEL value 15 ppm ;
	ACGIH, US:	TWA value 5 ppm ;
	OSHA Z1:	Skin Designation ; The substance can be absorbed through the skin.
	OSHA Z1:	PEL 25 ppm 100 mg/m3 ;
ethyl acrylate	ACGIH, US:	STEL value 15 ppm ;
	ACGIH, US:	TWA value 5 ppm ;
	OSHA Z1:	Skin Designation ; The substance can be absorbed through the skin.
	OSHA Z1:	PEL 25 ppm 100 mg/m3 ;

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed. At concentrations < 250 ppm, use a chemical cartridge respirator. At concentrations > 250 ppm, use an air-supplied or self-contained breathing apparatus.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

light protective clothing

General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. Avoid inhalation of vapour. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Eye wash fountains and safety showers must be easily accessible. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	acrylic-like	
Odour threshold:	2 ppb	
Colour:	colourless	
pH value:	(20 °C)	
	not applicable, of low solubility	
Melting point:	-71.2 °C	
	Literature data.	
Boiling point:	99.8 °C	(other)
	(1,013 hPa)	
Flash point:	9 °C	(closed cup)
	Literature data.	
Flammability:	Highly flammable.	
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	

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Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	372 °C	
Vapour pressure:	Literature data. 40 hPa (20.9 °C)	
Density:	0.92 g/cm3 (20 °C)	(other)
	Literature data. 0.8867 g/cm3 (50 °C)	
	0.8812 g/cm3 (55 °C)	(calculated)
Relative density:	0.92 (20 °C)	
Vapour density:	3.5	
Partitioning coefficient n-octanol/water (log Pow):	1.18 (25 °C)	(OECD Guideline 107)
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	0.535 mPa.s (25 °C)	
Viscosity, kinematic:	Literature data. approx. 0.582 mm2/s (25 °C)	
Particle size:	The substance / product is marketed or used in a non solid or granular form.	
Solubility in water:	20 g/l (20 °C)	
Solubility (qualitative):	Literature data. miscible	
Molar mass:	solvent(s): organic solvents, 100.12 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

10. Stability and Reactivity

Reactivity

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing. (other)

Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.
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Chemical stability

The product is stable if stored and handled as prescribed/indicated.

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Possibility of hazardous reactions

Explosion and fire hazard exists under confined conditions. Ignitable air mixtures can form when the product is heated above the flash point and/or when sprayed or atomized. Formation of explosive gas/air mixtures.

Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat. Polymerization produces gases which may burst closed or confined containers.

Reactions may cause ignition.

Risk of spontaneous polymerization by oxygen depletion of the liquid phase.

Reacts with peroxides and other radical components. Reacts with nitric acid. Polymerizes explosively in contact with strong oxidizing agents. Risk of spontaneous polymerization in the presence of oxidizing agents.

Hazardous reactions in presence of mentioned substances to avoid.

The product is stabilized against spontaneous polymerization prior to despatch. The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid heat. Avoid oxygen content above the product of less than 5 %. Do not blanket with nitrogen.

Avoid UV-light and other radiation with high energy. Avoid direct sunlight. Avoid prolonged storage.

Avoid inhibitor loss. Avoid excessive temperatures. Avoid all sources of ignition: heat, sparks, open flame.

Incompatible materials

radical formers, free radical initiators, peroxides, mercaptans, nitro-compounds, perborates, azides, ether, ketones, aldehydes, amines, nitrates, nitrites, oxidizing agents, reducing agents, strong bases, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts

Inert gas

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion. Of pronounced toxicity after short-term inhalation. Of moderate toxicity after short-term skin contact.

Oral

Type of value: LD50

Species: rat (male)

Value: 1,120 mg/kg (similar to OECD guideline 401)

Inhalation

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Type of value: LC50
Species: rat (male/female)
Value: < 9.137 mg/l (OECD Guideline 403)
Exposure time: 4 h
The vapour was tested.

Dermal

Type of value: LD50
Species: rat (male)
Value: 3,049 mg/kg (similar to OECD guideline 402)

Assessment other acute effects

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

Skin

Species: rabbit
Result: Irritant.
Method: OECD Guideline 404

Eye

Species: rabbit
Result: Irritant.
Method: Draize test

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse
Result: sensitizing
Method: OECD Guideline 429

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. After repeated exposure the prominent effect is local irritation.

Genetic toxicity

Assessment of mutagenicity: In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays.

Carcinogenicity

Assessment of carcinogenicity: In long-term animal studies in which the substance was given by inhalation, a carcinogenic effect was not observed. The substance showed no carcinogenic activity in animals after chronic administration to the skin. In long-term studies in rats and mice in which the substance was given by gavage, a carcinogenic effect was observed. A carcinogenic potential can essentially be excluded after a single or short-term exposure to the substance. IARC (International

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Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) 4.6 mg/l, *Salmo gairdneri*, syn. *O. mykiss* (OECD 203; ISO 7346; 84/449/EEC, C.1, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates

EC50 (48 h) 7.9 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants

EC50 (72 h) 4.5 mg/l (biomass), *Selenastrum capricornutum* (OECD Guideline 201, static)

The statement of the toxic effect relates to the analytically determined concentration.

Chronic toxicity to fish

Study scientifically not justified.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) 0.19 mg/l, *Daphnia magna* (OECD Guideline 202, part 2, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity

Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

aerobic

activated sludge, domestic/EC10 (72 h): > 100 mg/l

Nominal concentration.

Persistence and degradability

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Assessment biodegradation and elimination (H₂O)
Readily biodegradable (according to OECD criteria).

Elimination information

80 - 90 % TIC of the ThIC (28 d) (ISO 14593) (aerobic, activated sludge, domestic)

Assessment of stability in water
In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)
approx. $t_{1/2}$ 1,500 d, (OPPTS 835.2130, pH 7)
In contact with water the substance will hydrolyse slowly.

Bioaccumulative potential

Assessment bioaccumulation potential
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Uncleaned empties should be disposed of in the same manner as the contents.
Flammable vapors may exist in containers in which residues of this product remain. Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport

TDG

Hazard class:	3
Packing group:	II
ID number:	UN 1917

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Hazard label: 3
Proper shipping name: ETHYL ACRYLATE, STABILIZED

Sea transport

IMDG

Hazard class: 3
Packing group: II
ID number: UN 1917
Hazard label: 3
Marine pollutant: NO
Proper shipping name: ETHYL ACRYLATE, STABILIZED

Air transport

IATA/ICAO

Hazard class: 3
Packing group: II
ID number: UN 1917
Hazard label: 3
Proper shipping name: ETHYL ACRYLATE, STABILIZED

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released / listed

NFPA Hazard codes:

Health: 3 Fire: 3 Reactivity: 2 Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Flam. Liq.	2	Flammable liquids
Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic
Acute Tox.	3 (Inhalation - vapour)	Acute toxicity
Skin Sens.	1B	Skin sensitization
Acute Tox.	5 (dermal)	Acute toxicity

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2021/08/12

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We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use.

Any other intended applications should be discussed with the manufacturer.

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