

Safety data sheet

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BASF Safety data sheet

Date / Revised: 07.05.2024 Version: 8.0

Product: ETHYL ACRYLATE

(30041302/SDS_GEN_AU/EN)

Date of print: 26.07.2024

1. Substance/preparation and manufacturer/supplier identification

Product name:

ETHYL ACRYLATE

Use: Monomer.

Manufacturer/supplier:

BASF Australia Limited (ABN 62 008 437 867) Level 12, 28 Freshwater Place Southbank Victoria 3006, AUSTRALIA

Telephone: +61 3 8855-6600 Telefax number: +61 3 8855-6511

Emergency information:

BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia] BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

2. Hazard identification

Classification of the substance and mixture:

Flammable liquids: Cat.2

Acute toxicity: Cat.3 (Inhalation - vapour)

Acute toxicity: Cat.4 (oral)
Acute toxicity: Cat.5 (dermal)

Skin irritation: Cat.2 Eye irritation: Cat.2A Skin sensitization: Cat.1B

Specific target organ toxicity — single exposure: Cat.3 (irritating to respiratory system)

Hazardous to the aquatic environment - acute: Cat.2 Hazardous to the aquatic environment - chronic: Cat.3

Label elements and precautionary statement:

Pictogram:

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Signal Word: Danger

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H313 May be harmful in contact with skin.
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):

Use only outdoors or in a well-ventilated area. P271 Wear protective gloves and eye protection or face protection. P280 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe mist or vapour. Take action to prevent static discharges. P243 P280 Wear eye protection. 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. Wash contaminated body parts thoroughly after handling. P264 Do not eat, drink or smoke when using this product. P270

P242 Use non-sparking tools.

P240 Ground and bond container and receiving equipment.

Precautionary Statements (Response):

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or

doctor/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): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P333 + P313 If skin irritation or rash occurs: Get medical attention.

P330 Rinse mouth.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P370 + P378 In case of fire: Use water spray, dry powder, foam or carbon dioxide for

extinction.

P337 + P313 If eye irritation persists: Get medical attention.

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.

Other hazards which do not result in classification:

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.

3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

ethyl acrylate

CAS Number: 140-88-5

Hazardous ingredients

ethyl acrylate

Content (W/W): >= 99.7 % - <= Flam. Liq.: Cat. 2

100 % Acute Tox.: Cat. 3 (Inhalation - vapour)

CAS Number: 140-88-5 Acute Tox.: Cat. 4 (oral)
Acute Tox.: Cat. 5 (dermal)

Skin Irrit.: Cat. 2 Eye Irrit.: Cat. 2A Skin Sens.: Cat. 1B

STOT SE: Cat. 3 (irr. to respiratory syst.)

Aquatic Acute: Cat. 2 Aquatic Chronic: Cat. 3

4. 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.

On skin contact:

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

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On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

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

Note to physician:

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.

Hazards: 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. (Further) symptoms and / or effects are not known so far

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

5. Fire-Fighting Measures

Suitable extinguishing media:

dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons: water jet

Additional information:

Use extinguishing measures to suit surroundings.

Specific hazards:

Risk of violent self-polymerization if overheated in a container. Cool endangered containers with water-spray.

Flammable. See SDS section 7 - Handling and storage.

Special protective equipment:

Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:

Extend fire extinguishing measures to the surroundings. Fight fire from maximum distance. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

Further information:

In case of a fire in the vicinity a restabilization system should be used if the temperature in the bulk storage-tank 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 bulk storage-tank reaches 60°C.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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6. Accidental Release Measures

Personal precautions:

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools.

Environmental precautions:

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

Methods for cleaning up or taking up:

For large amounts: Pump off product.

Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations. Ensure adequate ventilation. Suppress gases/vapours/mists with water spray jet. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Cleaning operations should be carried out only while wearing breathing apparatus. Pick up with suitable appliance and dispose of.

Additional information: High risk of slipping due to leakage/spillage of product.

Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

7. Handling and Storage

Handling

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.

The temperatures which must be avoided are to be considered. Protect against heat. Protect from direct sunlight. Protect contents from the effects of light. Do not open warm or swollen product containers. Remove persons to safety and alert fire brigade.

Ensure adequate inhibitor and dissolved oxygen level.

Avoid inhalation of dusts/mists/vapours. Avoid aerosol formation. Avoid all direct contact with the substance/product.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame. Substance/product can form explosive mixture with air. Ground all transfer equipment properly to prevent electrostatic discharge. It is recommended that all conductive parts of the machinery are grounded. Explosion-proof equipment is

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not necessary when loading and processing of the product takes place at a minimum of 5 °C below the flash point.

Heated containers should be cooled to prevent polymerization. If exposed to fire, keep containers cool by spraying with water. Emergency cooling must be provided for the eventuality of a fire in the vicinity.

Storage

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. Avoid UV-light and other radiation with high energy. Protect against contamination.

In case of bulk storage, the storage-tanks 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.

This product should be processed as soon as possible. Ensure adequate inhibitor and dissolved oxygen level. Do not store with less than 10 % headspace above liquid.

Storage stability is based upon ambient temperatures and conditions described.

It is recommended to keep a safe distance of +2 degrees above the crystallization range.

The product is stabilized, the shelf life should be noted.

Storage temperature: 45 °C

A restabilization system should be used if the temperature in the bulk storage-tank reaches the indicated value.

Storage temperature: 60 °C

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

8. Exposure controls and personal protection

Components with occupational exposure limits

ethyl acrylate, 140-88-5;

STEL value 15 ppm (ACGIHTLV) TWA value 5 ppm (ACGIHTLV)

Peak limitation 20 mg/m3; 5 ppm (OEL (AU)) Peak limitation 20 mg/m3; 5 ppm (AU NOEL)

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Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

butyl rubber (butyl) - 0.7 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

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.

9. Physical and Chemical Properties

Form: liquid
Colour: colourless
Odour: acrylic-like
Odour threshold: 2 ppb

pH value:

(20 °C)

not applicable, of low solubility

Melting point: -71.2 °C

Literature data.

Boiling point: 99.8 °C

(1,013 hPa)

Flash point: 9 °C (closed cup)

Literature data.

Evaporation rate:

Value can be approximated from Henry's Law Constant or vapor

pressure.

Flammability (solid/gas): Highly flammable. (derived from flash - and boiling

point)

(other)

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Lower explosion limit:

For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15

°C below the flash point.

Upper explosion limit:

For liquids not relevant for classification and labelling.

Ignition temperature: 372 °C

Literature data.

Thermal decomposition: 155 °C , 1,220 J/g (DSC (DIN 51007))

Based on its structural properties the Self ignition:

Test type: Spontaneous selfproduct is not classified as selfignition at room-temperature.

igniting.

Self heating ability: It is not a substance capable of

spontaneous heating.

Not tested on account of the low

melting-point.

SADT: Not a substance/mixture liable to self-decomposition according to

GHS.

Explosion hazard: Based on the chemical structure (other)

there is no indication of explosive

properties.

Fire promoting properties: Based on its structural properties (other)

the product is not classified as

oxidizing.

40 hPa Vapour pressure:

(20.9 °C)

0.92 g/cm3 Density: (other)

(20 °C)

Literature data. 0.8867 g/cm3

(50 °C)

0.8812 g/cm3 (calculated)

(55 °C)

Relative density: 0.9234

(20 °C)

Relative vapour density (air):3.45 (calculated)

(20 °C)

Heavier than air.

Solubility in water: Literature data.

> 20 g/l (20 °C)

Solubility (qualitative) solvent(s): organic solvents

miscible

Partitioning coefficient n-octanol/water (log Pow): 1.18 (OECD Guideline 107)

(25 °C)

Adsorption/water - soil: KOC: 3.9 - 85; log KOC: 1.9 (OECD Guideline 106)

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Surface tension:

Based on chemical structure, surface

activity is not to be expected.

Viscosity, dynamic: 0.535 mPa.s

(25 °C)

Literature data.

Viscosity, kinematic: approx. 0.582 mm2/s

(25 °C)

Molar mass: 100.12 g/mol

10. Stability and Reactivity

Conditions to avoid:

Avoid heat. Avoid oxygen content above the product of less than 5 %. 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. Avoid freezing. Avoid moisture.

Thermal decomposition: 155 °C, 1,220 J/g (DSC (DIN 51007))

Substances to avoid:

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

Corrosion to metals: No corrosive effect on metal.

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.

Polymerization coupled with heat formation.

Risk of spontaneous polymerization by oxygen depletion of the liquid phase. Risk of spontaneous polymerization when heated or in the presence of UV radiation. 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 in the presence of starters for radical chain reactions (e.g. peroxides). Reacts with nitric acid. 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.

Hazardous decomposition products:

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

Chemical stability:

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

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Reactivity:

No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:

LD50rat (oral): 1,120 mg/kg (similar to OECD guideline 401)

Acute inhalation toxicity

LC50 rat (by inhalation): 9 mg/l 4 h (OECD Guideline 403)

The vapour was tested.

Acute dermal toxicity

LD50 rat (dermal): 3,049 mg/kg (similar to OECD guideline 402)

Assessment of acute toxicity

Of moderate toxicity after single ingestion. Of pronounced toxicity after short-term inhalation. Of low toxicity after short-term skin contact. The European Union (EU) has classified this substance as 'harmful' after dermal exposure.

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.

Irritation

Assessment of irritating effects:

Eye contact causes irritation. Skin contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant. (Draize test)

Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible.

Experimental/calculated data:

Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

Germ cell mutagenicity

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

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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 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 fully tested. The statements have been derived in parts from products of a similar structure or composition.

Developmental toxicity

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.

Specific target organ toxicity (single exposure)

Causes temporary irritation of the respiratory tract.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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.

Aspiration hazard

not applicable

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. Harmful to aquatic organisms based on long-term (chronic) toxicity study data. 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/EWG, C.1, Flow through.)

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

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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.

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.

Microorganisms/Effect on activated sludge:

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

Nominal concentration.

Chronic toxicity to fish:

No data available.

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:

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Soil living organisms:

other (28 d) > 1,000 mg/kg, soil dwelling microorganisms (OECD Guideline 217)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Terrestrial plants:

No data available.

Other terrestrial non-mammals:

No data available.

Mobility

Assessment transport between environmental compartments:

No data available.

Adsorption to solid soil phase is not expected.

Persistence and degradability

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):

t_{1/2} approx. 1,500 d (25 °C, pH value 7), (OPPTS 835.2130, pH 7)

In contact with water the substance will hydrolyse slowly.

Bioaccumulation potential

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Assessment bioaccumulation potential:

Does not accumulate in organisms.

Bioaccumulation potential:

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

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:

Uncleaned empties should be disposed of in the same manner as the contents.

14. Transport Information

Domestic transport:

UN number or ID number: UN 1917

UN proper shipping name: ETHYL ACRYLATE, STABILIZED

Transport hazard class(es): 3
Packing group: II
Environmental hazards: no

Special precautions for

None known

user:

Further information

Hazchem Code:3WE IERG Number:18P

Sea transport

IMDG

UN number or ID number: UN 1917

UN proper shipping name: ETHYL ACRYLATE, STABILIZED

Transport hazard class(es): 3
Packing group: II
Environmental hazards: no

Marine pollutant: NO

Special precautions for

user:

EmS: F-E; S-D

Air transport IATA/ICAO

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UN number or ID number: UN 1917

UN proper shipping name: ETHYL ACRYLATE, STABILIZED

Transport hazard class(es): 3 Packing group: II

Environmental hazards: No Mark as dangerous for the environment is needed

Special precautions for None known

user:

15. Regulatory Information

Other regulations

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Not Scheduled

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Registration status:

AICIS, AU

Listed in AIIC.

16. Other Information

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.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.