We create chemistry

Safety Data Sheet
METHYL METHACRYLATE

1. Identification

Product identifier used on the label

METHYL METHACRYLATE

Recommended use of the chemical and restriction on use

Recommended use*: Monomer.
Recommended use*: for industrial use only
Unsuitable for use: Not intended for sale to or use by the general public.

* 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.
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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

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2022-272)

Classification of the product

Flam. Liq.	2	Flammable liquids
Skin Irrit.	2	Skin irritation
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
Aquatic Acute	3	Hazardous to the aquatic environment - acute

Skin Sens.	1B	Skin sensitization

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

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.
P261	Avoid breathing mist or vapour or spray.
P271	Use only outdoors or in a well-ventilated area.
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.
P242	Use non-sparking tools.
P240	Ground and bond container and receiving equipment.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P332 + P313	If skin irritation occurs: Get medical attention.
P370 + P378	In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage):

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/container in accordance with local regulations.

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). Do not blanket with nitrogen.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2022-272)

Methyl methacrylate
CAS Number: 80-62-6
Content (W/W): >= 99.8 - <= 100.0%
Synonym: 2-Methyl-2-propenoic acid methyl ester; Methyl methacrylate, MMA

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:
Wash thoroughly with soap and water

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

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

Symptoms: Overexposure may cause:, asthma, tiredness, loss of memory, pain in the extremities, sleep disturbances, headache
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

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

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.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
Risk of violent self-polymerization if overheated in a container. Cool endangered containers with water-spray.

The product is combustible. See SDS section 7 - Handling and storage.

Advice for fire-fighters

Protective equipment for fire-fighting:
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.

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.

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

Impact Sensitivity:
Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Further accidental release measures:
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.

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

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

Environmental precautions
Discharge into the environment must be avoided. Collect contaminated washing water for appropriate disposal.

Methods and material for containment and cleaning 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.

7. Handling and Storage

Precautions for safe 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 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.

Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

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. 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/Personal Protection

Components with occupational exposure limits

Methyl methacrylate	ACGIH, US:	TWA value 50 ppm ;
	ACGIH, US:	STEL value 100 ppm ;
	OSHA Z1:	PEL 100 ppm 410 mg/m3 ;

Advice on system design:
Ensure adequate ventilation.

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:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Avoid contact with the skin, eyes and clothing. Avoid inhalation of vapour. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and Chemical Properties

Physical state:	liquid	
Form:	liquid	
Odour:	vinegar-like	
Odour threshold:	0.049 ppm	
Colour:	colourless	
pH value:	neutral	
Melting point:	-48 °C Literature data.	
Freezing point:	No data available.	
Boiling point:	100.36 °C (1,013.25 hPa)	
Boiling range:	No data available.	
Flash point:	10 °C	(DIN 51755, closed cup)
Flammability:	Highly flammable.	(derived from flash - and boiling point)
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.	
Heat of Combustion:	26.52 kJ/g	
Autoignition:	435 °C Literature data.	
SADT:	Not a substance/mixture liable to self-decomposition according to GHS.	
Vapour pressure:	30 hPa (16.67 °C) dynamic	(measured)
	37 hPa (20 °C) dynamic	(measured)
	100 hPa (39.4 °C) dynamic	(measured)
Density:	0.94 g/cm3 (20 °C) Literature data.	
	0.9085 g/cm3 (50 °C)	(OECD Guideline 109)
Relative density:	0.94 (20 °C) Literature data.	
Relative vapour density:	3.45 (20 °C) Heavier than air.	(calculated)
Partitioning coefficient n-octanol/water (log Pow):	1.38 (20 °C)	

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:	0.53 mPa.s (20 °C) Literature data.
Viscosity, kinematic:	not determined
Solubility in water:	15.3 g/l (20 °C)
Solubility (qualitative):	soluble solvent(s): organic solvents,
Molecular weight:	100.12 g/mol
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form.

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:
Corrosive effects to metal are not anticipated.

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

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

Chemical stability

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

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.
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.

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.
Do not blanket with nitrogen.

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, alkaline reactive substances, 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: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Oral
Type of value: LD50
Species: rat
Value: approx. 7,900 mg/kg
Literature data.

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: 29.8 mg/l
Exposure time: 4 h
The vapour was tested.

Dermal
Type of value: LD50

Species: rabbit (male)
Value: > 5,000 mg/kg (similar to OECD guideline 402)
No mortality was observed.

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

Irritation / corrosion
Assessment of irritating effects: Irritating to skin. Not irritating to the eyes.

Skin
Species: rabbit
Result: Irritant.
Method: similar to OECD guideline 404

Eye
Species: rabbit
Result: non-irritant
Method: Draize test

Sensitization
Assessment of sensitization: Caused skin sensitization in animal studies.

Mouse Local Lymph Node Assay (LLNA)
Species: mouse
Result: skin sensitizing
Method: OECD Guideline 429
Literature data.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation.

Genetic toxicity
Assessment of mutagenicity: Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Carcinogenicity
Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by drinking-water, a carcinogenic effect was not observed. In long-term studies in rats and mice in which the substance was given by inhalation, a carcinogenic effect was not observed. IARC Group 3 (not classifiable as to human carcinogenicity).

Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely harmful 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) > 79 mg/l, Oncorhynchus mykiss (Fish test acute, Flow through.)

Aquatic invertebrates
EC50 (48 h) 69 mg/l, Daphnia magna (Daphnia test acute, Flow through.)

Aquatic plants
EC50 (72 h) > 110 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)

Chronic toxicity to fish
No observed effect concentration (35 d) 9.4 mg/l, Brachydanio rerio (OECD Guideline 236, Flow through.)

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21 d) 37 mg/l, Daphnia magna (OECD Guideline 211, Flow through.)

Soil living organisms

Toxicity to soil dwelling organisms:
LC50 (28 d) > 1000 ppm, soil dwelling microorganisms (other, artificial soil)

Toxicity to terrestrial plants

No data available.

Other terrestrial non-mammals
No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
Screening test aerobic
activated sludge, domestic/EC0 (14 d): 100 mg/l

Persistence and degradability

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

Elimination information

94 % BOD of the ThOD (14 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, activated sludge) Readily biodegradable.

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

Information on Stability in Water (Hydrolysis)
$t_{1/2}$ 4.4 a, (28 d) (pH value 7), (other, pH 7)

Bioaccumulative potential

Assessment bioaccumulation potential
Accumulation in organisms is not to be expected.

Bioaccumulation potential
No data available.

Mobility in soil

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

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters. Acutely harmful for aquatic organisms.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations.

Container disposal:
Disposal must be made according to official regulations.

14. Transport Information

Land transport
TDG

Hazard class:	3
Packing group:	II
ID number:	UN 1247
Hazard label:	3
Proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED

Sea transport
IMDG

Hazard class:	3
Packing group:	II
ID number:	UN 1247
Hazard label:	3
Marine pollutant:	NO

Proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED

Air transport
IATA/ICAO

Hazard class:	3
Packing group:	II
ID number:	UN 1247
Hazard label:	3
Proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED

15. Regulatory Information

Federal Regulations

Registration status:
Chemical DSL, CA

DSL listed and/or otherwise compliant.

NFPA Hazard codes:
Health: 2 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.	5 (Inhalation - vapour)	Acute toxicity
Skin Irrit.	2	Skin irritation
Skin Sens.	1B	Skin sensitization
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
Aquatic Acute	3	Hazardous to the aquatic environment - acute

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2025/10/09

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.

END OF DATA SHEET