



Hazard Statements	Highly flammable liquid and vapour. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction.
Precautionary Statements	Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection. Avoid breathing dust / fume / gas / mist / vapours / spray. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Store in a well ventilated place. Keep cool.

## Section 3. Composition

### 3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Methyl methacrylate	80-62-6	201-297-1	01-2119452498-28-XXXX	>99.9%	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3 (I)

## Section 4. First Aid

### 4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. OBTAIN MEDICAL ATTENTION URGENTLY.
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

### 4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

### 4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

Extinguishing Media	Alcohol resistant foam, dry powder, or carbon dioxide. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

Hazards	Vapour-air mixtures are explosive. May polymerise on heating, sealed containers may rupture explosively if heated.
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### 5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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## Section 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots.
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### 6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

### 6.3 Methods and material for containment and cleaning up

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.

Minor Spillage Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with copious amounts of water.

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

### 7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Ensure temperature does not reach more than 25 C Keep well separated from oxidising agents and peroxides.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)	Short Term 15min period		
Methyl methacrylate	80-62-6	>99.9%	50.0 ppm	100.0 mg/m-3	208.0 ppm	416.0 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.

Hand Protection Use solvent resistant gloves.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance Clear colourless liquid.

Odour Characteristic acrylic odour.

pH Not applicable

Boiling Point 100.36 °C

Melting Point -48 °C

Flash Point 10 °C (Closed cup)

Upper Flammable Limit 12.5%

Lower Flammable Limit 2.1%

Auto Ignition 435 °C

Explosive Properties Has a tendency to polymerise and this may become explosive.

Oxidising Properties No.

Vapour Pressure	37 hPa @ 20 °C
Relative Density	0.94
Water Solubility	15.3 g/L @ 20 °C Moderately soluble in water.

## 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

10.1 Reactivity	No data available.
10.2 Chemical Stability	Stable under normal conditions but can polymerise if heated.
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to Avoid	Heat and polymerisation initiators.
10.5 Incompatible Materials	Polymerised by oxygen and peroxides, this polymerisation can become violently exothermic.
10.6 Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

Eyes	Both the vapour and liquid may, be irritating to the eyes.
Skin	The liquid is mildly irritating to the skin. Chronic exposure may lead to sensitisation and dermatitis.
LD50 Skin	>5000 mg/Kg Rabbit
Ingestion	Ingestion will produce gastric disturbances, vomiting, narcosis, paralysis and liver and kidney damage.
LD50 Oral	8500-9400 mg/Kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract. Prolonged exposure to vapour concentrations above the occupational exposure limits may cause narcosis. Fatal cases of inhalation exposure have occurred.
LD50 Inhalation	29.8 mg/L Rat (4 hours)
TCLo	12500ppm
Carcinogenicity	It is suspected as a long term carcinogen in man but evidence is inconclusive.
Mutagenicity	May be a mutagen.
Reproductive Effects	Not teratogenic but high doses have caused maternal and foetal toxicity.
Other Information	The irritant effect provides warning that control of exposure is needed.

## Section 12. Ecological

12.1 Toxicity	Partially biodegradable in water (BOD 5 day) 0.14-0.9 g/g. (THOD) 1.92 g/g. Low toxicity to fish- LC50 (bluegill sunfish) 96hr - 232 mg/l. Substantially removed in biological treatment processes, but has high potential to bioaccumulate.
LC50 Algal	110 mg/L Algae (72 hours)
LC50 Crustacea	69 mg/L Daphnia magna
LC50 Fish	100 mg/L Rainbow Trout (96 hours)
12.2 Persistence and degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion.

## Section 14. Transport Information

14.1 UN Number	1247
14.2 Proper Shipping Name	Methyl methacrylate monomer, stabilized
14.3 Transport classes	
UN classification	3
Subsidiary hazard(s)	None
Transport category	2
ADR Hazard ID	339
Tunnel Restriction Code	D/E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification	Flammable liquid, category 2; Skin corrosion/irritation, category 2; Skin sensitization, category 1; Spec target organ tox - single, category 3
Signal word	Danger
Hazard Pictograms	Two red diamond-shaped hazard pictograms. The first contains a black flame symbol. The second contains a black exclamation mark.
Hazard Statements	H225, H335, H315, H317 Highly flammable liquid and vapour. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction.
Precautionary Statements	P210, P280, P261, P302+P352, P333+P313, P403+P235 Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection. Avoid breathing dust / fume / gas / mist / vapours / spray. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Store in a well ventilated place. Keep cool.

### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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