

Material Safety Data Sheet Poly(methyl methacrylate)

Section 1 - Product Identification

Synonyms : Methyl methacrylate, polymerized; PMMA
Chemical Formula : (C₅O₂H₈)_n
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Recommended use : Laboratory chemicals.

Section 2 – Composition/Information on Ingredients

Chemical Name	EC No/CAS No	Purity, %
Methyl methacrylate polymer	9011-14-7	max. 99.9

Section 3 – Hazards Identification

3.1 Classification

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225
Skin irritation (Category 2), H315
Skin sensitization (Category 1), H317
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

3.2 Label elements

Signal word Danger : Danger

Hazard statement(s) H317 : May cause an allergic skin reaction.

Precautionary statement(s)

none

Supplemental Hazard Statements

none

Section 4 – Composition/ information on ingredients

4.1 Composition comments

Formula : C₅H₈O₂
Molecular weight : 100.12 g/mol
CAS-No. : 80-62-6
EC-No. : 201-297-1
Index-No. : 607-035-00-6

Section 5 – First-Aid Measures

5.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled After inhalation: fresh air.

In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact After eye contact: rinse out with plenty of water. Remove contact lenses. If swallowed

After swallowing immediately make victim drink water (two glasses at most). Consult a physician.

5.2 Most important symptoms and effects, both acute and delayed

No data available

5.3. Indication of any immediate medical attention and special treatment needed

No data available

Section 6 – Fire Fighting Measures

6.1. Suitable Extinguishing media

Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam.

6.2. Specific hazards arising from the chemical

Carbon oxides

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

6.3. Special protective actions for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing

Section 7 – Accidental Release Measures

7.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

7.2. Environmental precautions

Do not let product enter drains. Risk of explosion.

7.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment.

Section 8 – Handling and Storage

8.1. Precautions for safe Handling

Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product.

Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

8.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

Section 9 – Exposure Controls/Personal Protection

9.1. Appropriate engineering controls

Use recommended safe handling practices to minimize unnecessary exposure. General room ventilation is adequate for storage and ordinary handling. Use local exhaust at points of fume generation or if dusty conditions prevail.

9.2. Individual protection measures, such as personal protective equipment (PPE)

Respiratory protection

Wear safety glasses with side shields or chemical goggles to prevent eye contact. Have eye- washing facilities readily available where eye contact can occur. Do not wear contact lenses when working with this substance. Wear impervious gloves and protective clothing to prevent

Section 10 – Physical and Chemical Properties

10.1. Information on basic physical and chemical properties

Physical State : Solid

Appearance : White

Odor : Odorless

Odor Threshold : No data available

Melting Point/Range : > 150 °C / > 302 °F

Softening Point : No data available

Boiling Point/Range : No information available

Flammability (liquid) : Not applicable

Flammability (solid,gas) : No information available

Explosion Limits : No data available

Flash Point : 303 °C / 577.4 °F

Autoignition Temperature : 304 °C / 579.2 °F

Decomposition Temperature : No data available

pH : No information available

Viscosity : Not applicable

Water Solubility : Insoluble

Solubility in other solvents : No information available

Partition Coefficient (n-octanol/water)

Vapor Pressure : No data available

Density / Specific Gravity : No data available

Bulk Density : No data available

Vapor Density : Not applicable

Particle characteristics : No data available

10.2. Other information

Evaporation Rate Not applicable - Solid

Section 11 – Stability and Reactivity

11.1. Reactivity

Vapors may form explosive mixture with air

11.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) . Contains the following stabilizer(s): hydroquinone monomethyl ether (0.01 %)

11.3. Possibility of hazardous reactions

No data available

11.4. Conditions to avoid:

Heat, flames and sparks. Heat. Contamination Keep away from direct sunlight. Heat, flames and sparks. Extremes of temperature and direct sunlight. Warming.

11.5. Incompatible materials

Strong oxidizing agents.

11.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

Section 12 – Toxicological Information

Likely Routes of Exposure : Eyes and skin contact.

Acute Effects : Mechanical irritation of eyes and skin.

Oral Toxicity LD50 : Not Available

Inhalation Toxicity LD50 : Not Available.

Chronic Effects : None known.

Symptoms : Irritation of eyes and skin.

Carcinogenicity : This product has not been found to be carcinogenic by the NTP, ACGIH, IARC or OSHA.

Further information : This product has no known adverse effect on human health.

Section 13 – Ecological Information

13.1. Toxicity

Do not empty into drains.

13.2. Bioaccumulative potential

May have some potential to bioaccumulate.

13.3 Insolubility

Insoluble in water.

13.4. Mobility in soil

Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility

13.5. Other adverse effects

No Data Available

Section 14 – Disposal Considerations

14.1. Disposal methods

Dispose of this product in compliance with all applicable federal, state and local regulations. The unused product is not specifically listed by EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP).

Section 15 – Transport Information

D.O.T. 49 CFR 172.101 : Not regulated
TDG : Not regulated
UN Proper Shipping Name/Number : Not regulated
IMDG : Not regulated
IATA : Not regulated

Section 16 – Regulatory Information

16.1. Safety, health and environmental regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : FLAMMABLE LIQUIDS

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Section 16 : Additional Information

16.1. List of abbreviation and acronyms used in this MSDS

SDS : Safety Data Sheets

Index N° : atomic number of the element most characteristic of the properties of the substance

CAS No : Chemical Abstracts Service number

EC No : EINECS Number : European Inventory of Existing Commercial Substances

Repr. Cat. 2 : Substance presumed human reproductive toxicant

Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.

GHS : Globally Harmonised System of Classification and Labelling

LD₅₀ : Median Lethal Dose

LC₅₀ : Lethal Concentration, 50%

N.A. : Not Applicable

OSHA : Occupational Safety & Health Administration

Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)

PEL : Permissible Exposure Limits

ACGIH : American Conference of Governmental Industrial Hygienists

TLV : Threshold Limit Value

Japanese MITI : Japanese Ministry of International Trade and Industry

EC₅₀ : Half maximal effective concentration

UN : United Nations

U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the authority of the Environmental Protection Agency

Canadian DSL: Canadian Domestic Substances List

16.2. List of relevant hazard statements and precautionary statements used in this MSDS

Hazard Statement

H361 d: Suspected of damaging the unborn child

H319: Causes serious eye irritation

H303: May be harmful if swallowed

Precautionary Statements

Prevention

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P281: Use personal protective equipment as required.

P264: Wash eyes thoroughly after handling.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P308 + P313: If exposed or concerned: get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

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

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to in accordance with local regulations.

16.3. References

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 2. Denton SM (1996). Acute oral toxicity study in the rat: anhydrous boric acid. Final report. Report no.: 1341/7-1032.
 3. National Toxicology Program (NTP) – Technical Report Series No. TR324, NIH Publication No. 88 2580 (1987), PB88 213475/XAB
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 5. Heindel et al., Fund. Appl. Toxicol. (1992) 18, 266-277
 6. Birge W J, Black J A, EPA-560/-76-008 (April 1977) PB 267 085
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- For general information on the toxicology of borates see ECETOC Technical Report No. 63 (1995); Patty's Industrial Hygiene and Toxicology, 4th Edition Vol. II, (1994) Chap. 42, 'Boron'.

16.4. Disclaimer of Liability

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