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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product	Methyl Methacrylate (MMA)	**Revision date**	2026-11-16
Version	1.0	**Brand**	Richest

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name	Methyl Methacrylate (MMA)
Synonyms	METHYL METHACRYLATE; 80-62-6; methyl 2-methylprop-2-enoate; Pegalan; Methyl methylacrylate; Methacrylic acid methyl ester
CAS No.	80-62-6
EC No.	201-297-1
Molecular formula	C5H8O2
Molecular weight	100.12 g/mol
Relevant identified uses	Monomer for polymethyl methacrylate and copolymerization with other vinyl monomers.; Manufacture of resins, plastics, adhesives, coatings, lubricants, ion-exchange resins, textile/leather/paper auxiliaries and insulation casting materials.
Uses advised against	No specific uses advised against were identified in the reviewed sources.
Company	Richest Group
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SECTION 2: Hazards identification

GHS Classification	Flammable liquids Category 2; Skin irritation Category 2; Skin sensitization Category 1; Specific target organ toxicity—single exposure Category 3, respiratory system
Pictogram(s)	GHS02; GHS07
Signal word	Danger
Hazard statement(s)	H225 Highly flammable liquid and vapour; H315 Causes skin irritation; H317 May cause an allergic skin reaction; H335 May cause respiratory irritation
Precautionary statement(s)	P210; P233; P240; P241; P280; P303+P361+P353
Other hazards	Methyl methacrylate is used in the manufacture of resins and plastics. Methyl methacrylate is irritating to the skin, eyes, and mucous membranes in humans. An allergic response to dermal exposure may develop. Respiratory effects have been reported in humans following acute (short-term) and chronic (long-term) inhalation exposures.

SECTION 3: Composition/information on ingredients

Component	Methyl Methacrylate (MMA)
CAS No.	80-62-6
EC No.	201-297-1

SECTION 3: Composition/information on ingredients	
Classification	Flammable liquids Category 2; Skin irritation Category 2; Skin sensitization Category 1; Specific target organ toxicity—single exposure Category 3, respiratory system
Concentration	≥99.9%

SECTION 4: First-aid measures	
If inhaled	IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere.
In case of skin contact	Water flush promptly - If this chemical contacts the skin, flush the contaminated skin with water promptly. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water promptly. If irritation persists after washing, get medical attention.
In case of eye contact	First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.
If swallowed	DO NOT INDUCE VOMITING. Corrosive chemicals will destroy the membranes of the mouth, throat, and esophagus and, in addition, have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital.
Most important symptoms and effects	No data available
Indication of immediate medical attention	Treat symptomatically. Show this safety data sheet to medical personnel.

SECTION 5: Fire-fighting measures	
Suitable extinguishing media	Use dry chemical, carbon dioxide, or foam extinguishers. Vapors are heavier than air and will collect in low areas. Vapors may travel long distances to ignition sources and flashback.
Unsuitable extinguishing media	No data available
Special hazards arising from the chemical	· HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
Advice for firefighters	Excerpt from ERG Guide 129 [Flammable Liquids (Water-Miscible / Noxious); polymerization hazard]:

SECTION 6: Accidental release measures	
Personal precautions and emergency procedures	Avoid contact with the material. Ensure adequate ventilation. Wear appropriate personal protective equipment.
Environmental precautions	Prevent uncontrolled release to drains, soil and watercourses.
Methods for containment and cleaning up	Personal protection: chemical protection suit and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Do NOT wash away into sewer. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

SECTION 7: Handling and storage	
Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation or inhalation of dust, mist or vapour as applicable. Wash thoroughly after handling.
Conditions for safe storage, including incompatibilities	Keep container tightly closed in a dry, well-ventilated place, away from heat and ignition sources; SDS recommended storage temperature 2–8°C.

SECTION 8: Exposure controls/personal protection	
Occupational exposure limit values	50 ppm as TWA; 100 ppm as STEL; 210 mg/m³
Biological limit values	No biological limit values were identified in the reviewed sources.
Appropriate engineering controls	Provide adequate ventilation. Eyewash facilities should be available where contact is possible.
Eye/face protection	Excerpt from NIOSH Pocket Guide for Methyl methacrylate:
Skin and body protection	Excerpt from NIOSH Pocket Guide for Methyl methacrylate:
Respiratory protection	Use suitable respiratory protection if exposure limits may be exceeded or dust, mist or vapour is generated.
Thermal hazards	No specific thermal hazards were identified in the reviewed sources; see Sections 5 and 10.

SECTION 9: Physical and chemical properties	
Physical state	Colorless transparent liquid without visible impurities
Colour	Colorless volatile liquid
Odour	Characteristic quality: sulfur-like, sweet, sharp; hedonic tone: unpleasant
Melting point / freezing point	ca. -48°C at ca. 1013 hPa
Boiling point / boiling range	100.36°C at ca. 1013.25 hPa
Flammability	· HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
Explosion / flammability limits	LEL: 2.1 % (NTP, 1992); UEL: 12.5 % (NTP, 1992)
Flash point	10°C, closed cup, DIN 51755 Part 1
Auto-ignition temperature	421 °C
Decomposition temperature	No data available
pH	No data available
Viscosity	No data available
Solubility	15.3 g/L at 20°C
Partition coefficient n-octanol/water	1.38 at 20°C
Vapour pressure	37 hPa at 20°C
Density and/or relative density	0.94 g/cm3 at 20°C
Relative vapour density	3.45 (NTP, 1992) - Heavier than air; will sink (Relative to Air)
Particle characteristics	Not applicable (liquid).
Refractive index	Index of refraction: 1.4142 at 20 °C

SECTION 10: Stability and reactivity	
Reactivity	Highly flammable. Very slightly soluble in water.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	METHYL METHACRYLATE MONOMER, may polymerize if contaminated or subjected to heat. If polymerization takes place in a container, the container is subject to violent rupture. Oxidizes readily in air to form unstable peroxides that may explode spontaneously [Bretherick 1979. p.151-154, 164].
Conditions to avoid	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.
Incompatible materials	... Can react with oxidizing materials.; Potentially violent reaction with the polymerization initiators azoisobutyronitrile; dibenzoyl peroxide; di-tert-butyl peroxide; propionaldehyde.
Hazardous decomposition products	When heated to decomposition it emits acrid smoke and irritating fumes.

SECTION 11: Toxicological information	
Skin corrosion irritation	GHS classification: Skin irritation Category 2
Sensitization	GHS classification: Skin sensitization Category 1
Acute toxicity	LD50 Rat oral 9400 mg/kg.; LD50 Rat oral 7800 mg/kg; LC50 Rat inhalation 11,250 - 12,500 ppm/2 hr; LC50 Rat inhalation 13,220 ppm/3 hr
Toxicological summary	IDENTIFICATION: Methyl methacrylate is a volatile synthetic chemical that is used principally in the production of cast acrylic sheet, acrylic emulsions, and molding and extrusion resins. HUMAN EXPOSURE: Data on absorption following dermal exposure are limited. In humans, methyl methacrylate is rapidly metabolized to methacrylic acid. This compound is a mild skin irritant in humans and has the potential to induce skin sensitization in susceptible individuals.
Health effects	Irritation of eyes, nose, and throat. Nausea and vomiting. Liquid may cause skin irritation. (USCG, 1999)

SECTION 12: Ecological information	
Ecotoxicity	Toxicity threshold (cell multiplication inhibition test): Pseudomonas putida (bacteria): 100 mg/L; Toxicity threshold (cell multiplication inhibition test): Microcystis aeruginosa (alga) 120 mg/l
Persistence degradability	AEROBIC: Methyl methacrylate, present at 100 mg/L, reached 94% of its theoretical BOD in 2 weeks using an activated sludge inoculum in the Japanese MITI test(1).
Bioaccumulative potential	An estimated BCF of 4 was calculated in fish for methyl methacrylate(SRC), using a log Kow of 1.38(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).
Mobility in soil	The Koc of methyl methacrylate has been measured as 9-72(1) and as high as 95(2). According to a classification scheme(3), this Koc range suggests that methyl methacrylate is expected to have very high to high mobility in soil.
Other adverse effects	The rate constant for the vapor-phase reaction of methyl methacrylate with photochemically-produced hydroxyl radicals has been estimated as 2.6X10-11 cu cm/molecule-sec at 25 °C(1). This corresponds to an atmospheric half-life of about 15 hours at an atmospheric concentration of 5X10+5 hydroxyl radicals per cu cm(2).

SECTION 12: Ecological information

Environmental fate	ATMOSPHERIC FATE: According to a model of gas/particle partitioning of semivolatile organic compounds in the atmosphere(1), methyl methacrylate, which has a vapor pressure of 38.5 mm Hg at 25 °C(2), is expected to exist solely as a vapor in the ambient atmosphere.

SECTION 13: Disposal considerations

Product disposal methods	1.By absorbing it in vermiculite, dry sand, earth or similar material ... 2. By atomizing in suitable combustion chamber.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal in accordance with local regulations.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	1247
UN Proper Shipping Name	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es)	3
Packing group	II
Environmental hazards / Marine pollutant	ADR/RID: no; IMDG marine pollutant: no; IATA: no
Special precautions for user	Tunnel restriction code (D/E)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	Australia: 100 ppm, sensitizer (1990); Federal Republic of Germany: 50 ppm, short-term level 100 ppm, 5 min, 8 times per shift, sensitizer, Pregnancy group C, no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are adhered to (1992); Sweden: 50 ppm, short-term value 150 ppm, 15 min, skin, sensitizer (1990); United Kingdom: 100 ppm, 10-min STEL 125 ppm (1991).

SECTION 16: Other information

Full text of H-Statements	H225 Highly flammable liquid and vapour; H315 Causes skin irritation; H317 May cause an allergic skin reaction; H335 May cause respiratory irritation
Revision date	2026-11-16
Version	1.0
References	Supplier technical documents, public SDS/COA/TDS and regulatory sources reviewed. Public data citations are listed below. Public data sources: PubChem Methyl Methacrylate (CID 6658): https://pubchem.ncbi.nlm.nih.gov/compound/6658
Abbreviations	CAS: Chemical Abstracts Service; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; SDS: Safety Data Sheet.
Disclaimer	The information in this SDS applies to the specified product and is provided in good faith based on information available to Richest Group at the date of issue. It describes health, safety and environmental requirements and does not constitute a guarantee of product properties. Users must assess suitability and comply with applicable regulations.