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|  | MATERIAL SAFETY DATA SHEET | MSDS No. | M-01 |
| | METHYL METHACRYLATE | Effective From | 24/03/2021 |

SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifiers

Product name : Methyl methacrylate, MMA
Product Number : M55909
Brand : Aldrich
Index-No. : 607-035-00-6
CAS-No. : 80-62-6
REACH No. : 01-2119452498-28-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Bloomchemag BV
Sint - Antoniusstraat 16 b1,
B-2400 Mol, Belgium
Phone number +91 72919 74484 / 72919 74050
E-mail info@bloomchemag.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements


Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

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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 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves.
P370 + P378 In case of fire: Use dry powder or dry sand to extinguish.
P403 + P235 Store in a well-ventilated place. Keep cool.

Supplemental Hazard Statements none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : C₅H₈O₂
Molecular weight : 100,12 g/mol
CAS-No. : 80-62-6
EC-No. : 201-297-1
Index-No. : 607-035-00-6

Hazardous ingredients according to Regulation (EC) No 1272/2008

| Component | | Classification | Concentration |
|----------------------------|--------------|------------------------------------------------------------------------------|---------------|
| Methyl methacrylate | | | |
| CAS-No. | 80-62-6 | Flam. Liq. 2; Skin Irrit. 2; Skin Sens. 1; STOT SE 3; H225, H315, H317, H335 | <= 100 % |
| EC-No. | 201-297-1 | | |
| Index-No. | 607-035-00-6 | | |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact


Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Flash back possible over considerable distance., Container explosion may occur under fire conditions.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities


Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 - 8 °C

Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters **Components with workplace control parameters**

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 66 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).


Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--------------------|------------------------------------|
| a) Appearance | Form: liquid Colour: colourless |
| b) Odour | pungent |
| c) Odour Threshold | No data available |

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|-------------------------------------------------|----------------------------------------------------------------------|
| d) pH | No data available |
| e) Melting point/freezing point | Melting point/range: -48 °C - lit. |
| f) Initial boiling point and boiling range | 100 °C - lit. |
| g) Flash point | 9 °C - closed cup |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 12,5 %(V) Lower explosion limit: 2,12 %(V) |
| k) Vapour pressure | 37 hPa at 20 °C |
| l) Vapour density | 3,46 - (Air = 1.0) |
| m) Relative density | 0,936 g/cm ³ at 25 °C |
| n) Water solubility | 15,3 g/l at 20 °C |
| o) Partition coefficient: n-octanol/water | log Pow: 1,38 |
| p) Auto-ignition temperature | 400 °C at 1.013,25 hPa |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

9.2 Other safety information

- | | |
|-------------------------|--------------------|
| Surface tension | 28 mN/m at 20 °C |
| Relative vapour density | 3,46 - (Air = 1.0) |

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Polymerizes with evolution of heat. Avoid contact with incompatible materials. Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Check inhibitor content often adding to bulk liquid if needed. Do not blanket or mix with oxygen-free gas as it renders inhibitor ineffective.

Stable under recommended storage conditions.

Contains the following stabiliser(s):

Mequinol (<=0,003 %)


10.3 Possibility of hazardous reactions

Polymerises readily unless inhibited.

10.4 Conditions to avoid

May polymerize on exposure to light.


Heat, flames and sparks. Heat Extremes of temperature and direct sunlight.

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Heat, flames and sparks.

10.5 Incompatible materials

Oxidizing agents, Peroxides, Amines, Bases, acids, Reducing agents, Halogens

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10.6 Hazardous decomposition products

Other decomposition products - No data available
 In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 7.900 mg/kg

LC50 Inhalation - Rat - 4 h - 78.000 mg/m³

LD50 Dermal - Rabbit - male - > 5.000 mg/kg
 (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 4 h

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

in vivo assay - Mouse

May cause allergic skin reaction.
 (OECD Test Guideline 429)

Germ cell mutagenicity

No data available

Ames test

S. typhimurium

Result: negative

OECD Test Guideline 478

Mouse - male

Result: negative

Carcinogenicity

Carcinogenicity - Rat - male and female - Inhalation

No significant adverse effects were reported

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Developmental Toxicity - Rat - Inhalation

No significant adverse effects were reported

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure


No data available

Aspiration hazard

No data available

Additional Information

Repeated dose Rat - male - Oral - NOAEL : >= 124,1 mg/kg

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toxicity

RTECS: OZ5075000

Central nervous system depression, Drowsiness, Irritability, Dizziness, Ataxia., narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish static test LC50 - Lepomis macrochirus (Bluegill) - 283 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates flow-through test EC50 - Daphnia magna (Water flea) - 69 mg/l - 48 h

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata - > 110 mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 14 d
Result: 94 % - Readily biodegradable (OECD Test Guideline 301C)

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1247

IMDG: 1247

IATA: 1247

14.2 UN proper shipping name

ADR/RID: METHYL METHACRYLATE MONOMER, STABILIZED

IMDG: METHYL METHACRYLATE MONOMER, STABILIZED

IATA: Methyl methacrylate monomer, stabilized

14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

14.4 Packaging group

ADR/RID: II

IMDG: II


IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

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14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

| | |
|------|--------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H335 | May cause respiratory irritation. |