SAFETY DATA SHEET

Agilent Technologies

Kit PMMA low, 8 x 0.5 g, Part Number PSS-MMKITL

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

1.1 Product identifier

Product name : Kit PMMA low, 8 x 0.5 g, Part Number PSS-MMKITL

CAS number :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	547-63-7
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	9011-14-7

Part no. (chemical kit) : PSS-MMKITL

Part no. :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	PSS-mm102
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	*PSS-mm600
	PSS-mm1k
	PSS-mm2.1k
	PSS-mm4.7k
	PSS-mm10k
	PSS-mm23k
	PSS-mm55k

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use

PSS-mm102	PMMA, nominal Mw 102 g/mol, 0.5 g
PSS-mm600	PMMA, nominal Mw 600 g/mol, 0.5 g
PSS-mm1k	PMMA, nominal Mw 1,000 g/mol, 0.5 g
PSS-mm2.1k	PMMA, nominal Mw 2,100 g/mol, 0.5 g
PSS-mm4.7k	PMMA, nominal Mw 4,700 g/mol, 0.5 g
PSS-mm10k	PMMA, nominal Mw 10,000 g/mol, 0.5 g
PSS-mm23k	PMMA, nominal Mw 23,000 g/mol, 0.5 g
PSS-mm55k	PMMA, nominal Mw 55,000 g/mol, 0.5 g

Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

Note * :

***PSS-mm600**	**PMMA, nominal Mw 600 g/mol, 0.5 g**
PSS-mm1k	**PMMA, nominal Mw 1,000 g/mol, 0.5 g**
PSS-mm2.1k	**PMMA, nominal Mw 2,100 g/mol, 0.5 g**
PSS-mm4.7k	**PMMA, nominal Mw 4,700 g/mol, 0.5 g**
PSS-mm10k	**PMMA, nominal Mw 10,000 g/mol, 0.5 g**
PSS-mm23k	**PMMA, nominal Mw 23,000 g/mol, 0.5 g**
PSS-mm55k	**PMMA, nominal Mw 55,000 g/mol, 0.5 g**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Poly(methyl methacrylate) nominal Mw: 102 g/mol — Mono-constituent substance

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Mono-constituent substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Poly(methyl methacrylate) nominal Mw: 102 g/mol

H225	FLAMMABLE LIQUIDS	Category 2

Poly(methyl methacrylate) nominal Mw: 102 g/mol	The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : Poly(methyl methacrylate) nominal Mw: 102 g/mol

Signal word : Poly(methyl methacrylate) nominal Mw: 102 g/mol — Danger

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — No signal word.

Hazard statements : Poly(methyl methacrylate) nominal Mw: 102 g/mol — H225 - Highly flammable liquid and vapour.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — No known significant effects or critical hazards.

Precautionary statements

Prevention : Poly(methyl methacrylate) nominal Mw: 102 g/mol — P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Not applicable.

Response : Poly(methyl methacrylate) nominal Mw: 102 g/mol — Not applicable.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Not applicable.

Storage : Poly(methyl methacrylate) nominal Mw: 102 g/mol — Not applicable.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Not applicable.

SECTION 2: Hazards identification

Disposal	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.
Supplemental label elements	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not applicable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not applicable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not applicable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.
Tactile warning of danger	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not applicable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII :

PBT	P	B	T	vPvB	vP	vB
Poly(methyl methacrylate) nominal Mw: 102 g/mol						
N/A	N/A	N/A	N/A	N/A	N/A	N/A
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol						
No	Yes	No	No	No	No	No

Other hazards which do not result in classification	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	None known.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	May form combustible dust concentrations in air.

SECTION 3: Composition/information on ingredients

3.1 Substances : Poly(methyl methacrylate) nominal Mw: 102 g/mol — Mono-constituent substance

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification	Type
Poly(methyl methacrylate) nominal Mw: 102 g/mol methyl isobutyrate	EC: 208-929-5 CAS: 547-63-7	100	Flam. Liq. 2, H225	[1]
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer	CAS: 9011-14-7	100	Not classified. **See Section 16 for the full text of the H statements declared above.**	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

Poly(methyl methacrylate) nominal Mw: 102 g/mol — [1] Constituent

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — [1] Constituent

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

SECTION 4: First aid measures

Protection of first-aiders :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	No action shall be taken involving any personal risk or without suitable training.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Adverse symptoms may include the following: irritation redness

Inhalation :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Adverse symptoms may include the following: respiratory tract irritation coughing

Skin contact :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No specific data.

Ingestion :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific treatment.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).

SECTION 5: Firefighting measures

Unsuitable extinguishing media :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Do not use water jet.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — May form explosible dust-air mixture if dispersed.

Hazardous combustion products :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :

Poly(methyl methacrylate) nominal Mw: 102 g/mol — No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective

SECTION 6: Accidental release measures

equipment.

For emergency responders	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against

SECTION 7: Handling and storage

electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.

Advice on general occupational hygiene :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Poly(methyl methacrylate) nominal Mw: 102 g/mol P5c	5000 tonne	50000 tonne

7.3 Specific end use(s)

Recommendations :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Industrial applications, Professional applications.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Industrial applications, Professional applications.

SECTION 7: Handling and storage

Industrial sector specific solutions	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

SECTION 8: Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Liquid. [Clear.]
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Solid. [Powder.]
Colour	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Colourless.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Odour	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Odour threshold	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Melting point/freezing point	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Initial boiling point and boiling range	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	146.5°C
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Flammability	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not applicable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.

Flash point :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Closed cup: 4°C
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Closed cup: >250°C

Auto-ignition temperature :

Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.

Decomposition temperature :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

pH :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

Viscosity :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.

Solubility(ies) :

Media	Result
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	
water	Insoluble

Partition coefficient: n-octanol/water :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

Vapour pressure :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.

Evaporation rate :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

Relative density :

Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

SECTION 9: Physical and chemical properties

Vapour density	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not applicable.
Explosive properties	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Oxidising properties	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.
Particle characteristics			
Median particle size	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not applicable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific test data related to reactivity available for this product or its ingredients.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	The product is stable.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	The product is stable.
10.3 Possibility of hazardous reactions	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Under normal conditions of storage and use, hazardous reactions will not occur.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment

SECTION 10: Stability and reactivity

before transferring material. Prevent dust accumulation.

10.5 Incompatible materials	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Reactive or incompatible with the following materials: oxidising materials
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Reactive or incompatible with the following materials: oxidising materials
10.6 Hazardous decomposition products	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimates

N/A

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	Not available.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Not available.

Potential acute health effects

SECTION 11: Toxicological information

Inhalation	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Ingestion	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No known significant effects or critical hazards.
Skin contact	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No known significant effects or critical hazards.
Eye contact	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No specific data.
Skin contact	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No specific data.
Eye contact	:	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No specific data.
		Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Adverse symptoms may include the following: irritation redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Long term exposure

SECTION 11: Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

General :	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
	Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Carcinogenicity :	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
	Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No known significant effects or critical hazards.
Mutagenicity :	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
	Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No known significant effects or critical hazards.
Reproductive toxicity :	Poly(methyl methacrylate) nominal Mw: 102 g/mol	No known significant effects or critical hazards.
	Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer	-	<500	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Poly(methyl methacrylate) nominal Mw: 102 g/mol methyl isobutyrate	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer	No	Yes	No	No	No	No	No

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1237	UN1237	UN1237
14.2 UN proper shipping name	METHYL BUTYRATE	METHYL BUTYRATE	Methyl butyrate
14.3 Transport hazard class(es)	3 	3 	3 
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.

Additional information

Remarks : De minimis quantities

SECTION 14: Transport information

ADR/RID : **Hazard identification number** 33
Limited quantity 1 L
Tunnel code (D/E)

IMDG : **Emergency schedules** F-E, S-D

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product / Ingredient name	Identifiers	Status
Poly(methyl methacrylate) nominal Mw: 102 g/mol methyl isobutyrate		3

Label : Poly(methyl methacrylate) nominal Mw: 102 g/mol — Not applicable.
Poly(methyl methacrylate) nominal Mw: 600-55000 g/mol — Not applicable.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
Poly(methyl methacrylate) nominal Mw: 102 g/mol P5c

EU regulations

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States : All components are active or exempted.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Poly(methyl methacrylate) nominal Mw: 102 g/mol Flam. Liq. 2, H225	On basis of test data

Full text of abbreviated H statements

Poly(methyl methacrylate) nominal Mw: 102 g/mol	
H225	Highly flammable liquid and vapour.

Full text of classifications

SECTION 16: Other information

Poly(methyl methacrylate) nominal Mw: 102 g/mol	
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2

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Date of previous issue : 07/07/2023

Version : 2

Note * : ***PSS-mm600** **PMMA, nominal Mw 600 g/mol, 0.5 g**
PSS-mm1k **PMMA, nominal Mw 1,000 g/mol, 0.5 g**
PSS-mm2.1k **PMMA, nominal Mw 2,100 g/mol, 0.5 g**
PSS-mm4.7k **PMMA, nominal Mw 4,700 g/mol, 0.5 g**
PSS-mm10k **PMMA, nominal Mw 10,000 g/mol, 0.5 g**
PSS-mm23k **PMMA, nominal Mw 23,000 g/mol, 0.5 g**
PSS-mm55k **PMMA, nominal Mw 55,000 g/mol, 0.5 g**

Notice to reader

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