SAFETY DATA SHEET

Polymethyl methacrylate Standard

Section 1. Identification

Product identifier: Polymethyl methacrylate Standard

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

Analytical chemistry.
PL2020-0100 PMMA Calibration Kit M-L-10 (10 X 0.5G)
PL2020-0101 PMMA Calibration Kit M-M-10 (10 X 0.5G)
PL2020-0200 EasiVial PM kit 4 ml
PL2020-0201 EasiVial PM 2 ml
PL2020-0202 PMMA 2 ml tri-pack (90 vials)
PL2020-0203 PMMA 4 ml tri-pack (90 vials)
PL2022-2001 PMMA NOMINAL MP 500 1G
PL2022-2001SK PMMA NOMINAL MP 500 1G SHOKO
PL2022-2005 PMMA NOMINAL MP 500 5G
PL2022-2010 PMMA nominal Mpg 500 10g
PL2022-3001 PMMA nominal Mp 1k 1g
PL2022-3001SK PMMA nominal MP 1K 1G SHOKO
PL2022-3005 PMMA nominal Mp 1k 5g
PL2022-3010 PMMA nominal Mp 1k 10g
PL2022-5001 PMMA nominal MP 2k 1g
PL2022-5001SK PMMA nominal MP 2k 1g Shoko
PL2022-5005 PMMA nominal Mp 2k 5g
PL2022-5010 PMMA nominal Mp 2k 10g
PL2022-6001 PMMA nominal Mp 3k 1g
PL2022-6001SK PMMA NOMINAL MP 3K 1G SHOKO
PL2022-6005 PMMA nominal Mp 3k 5g
PL2022-6010 PMMA nominal Mp 3k 10g
PL2022-7001 PMMA nominal Mp 5k 1g
PL2022-7001SK PMMA NOMINAL MP 5K 1G SHOKO
PL2022-7005 PMMA nominal Mp 5k 5g
PL2022-7010 PMMA nominal Mp 5k 10g
PL2022-8001 PMMA nominal Mp 7k 1g
PL2022-8001SK PMMA nominal Mp 7k 1g
PL2022-8005 PMMA nominal Mp 7k 5g
PL2022-8010 PMMA nominal Mp 7k 10g
PL2022-9001 PMMA nominal Mpg 10k 1g
PL2022-9001SK PMMA NOMINAL MP 10K 1G SHOKO
PL2022-9005 PMMA nominal Mp 10k 5g
PL2022-9010 PMMA nominal Mp 10k 10g
PL2023-0001 PMMA nominal Mpg 13k 1g
PL2023-0001SK PMMA NOMINAL MP 13K 1G SHOKO

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Section 1. Identification

PL2023-0005  PMMA nominal Mp 13k 5g
PL2023-0010  PMMA nominal Mp 13k 10g
PL2023-1001  PMMA nominal Mp 20k 1g
PL2023-1001SK PMMA nominal Mp 20k 1g Shoko
PL2023-1005  PMMA nominal Mp 20k 5g
PL2023-1010  PMMA nominal Mp 20k 10g
PL2023-2001  PMMA nominal Mp 30k 1g
PL2023-2001SK PMMA NOMINAL MP 30K 1G SHOKO
PL2023-2005  PMMA nominal Mp 30k 5g
PL2023-2010  PMMA nominal Mp 30k 10g
PL2023-3001  PMMA nominal Mp 50k 1g
PL2023-3001SK PMMA NOMINAL MP 50K 1G SHOKO
PL2023-3005  PMMA nominal Mp 50k 5g
PL2023-3010  PMMA nominal Mp 50k 10g
PL2023-4001  PMMA nominal Mp 70k 1g
PL2023-4001SK PMMA nominal Mp 70k 1g Shoko
PL2023-4005  PMMA nominal Mp 70k 5g
PL2023-4010  PMMA nominal Mp 70k 10g
PL2023-5001  PMMA nominal Mp 100k 1g
PL2023-5001SK PMMA NOMINAL MP 100K 1G SHOKO
PL2023-5005  PMMA nominal Mp 100k 5g
PL2023-5010  PMMA nominal Mp 100k 10g
PL2023-6001  PMMA nominal Mp 130k 1g
PL2023-6001SK PMMA NOMINAL MP 130K 1G SHOKO
PL2023-6005  PMMA nominal Mp 130k 5g
PL2023-6010  PMMA nominal Mp 130k 10g
PL2023-7001  PMMA nominal Mp 200k 1g
PL2023-7001SK PMMA nominal Mp 200k 1g Shoko
PL2023-7005  PMMA nominal Mp 200k 5g
PL2023-7010  PMMA nominal Mp 200k 10g
PL2023-8001  PMMA nominal Mp 300k 1g
PL2023-8001SK PMMA NOMINAL MP 300K 1G SHOKO
PL2023-8005  PMMA nominal Mp 300k 5g
PL2023-8010  PMMA nominal Mp 300k 10g
PL2023-9001  PMMA nominal Mp 500k 1g
PL2023-9005  PMMA nominal Mp 500k 5g
PL2023-9010  PMMA nominal Mp 500k 10g
PL2024-0001  PMMA nominal Mp 700k 1g
PL2024-0001SK PMMA nominal Mp 700k 1g Shoko
PL2024-0005  PMMA nominal Mp 700k 5g
PL2024-0010  PMMA nominal Mp 700k 10g
PL2024-1001  PMMA nominal Mp 1m 1g
PL2024-1001SK PMMA nominal Mp 1m 1g Shoko
PL2024-1005  PMMA nominal Mp 1m 5g
PL2024-1010  PMMA nominal Mp 1m 10g
PL2024-2001  PMMA nominal Mp 1.5m 1g
PL2024-2001SK PMMA NOMINAL MP 1.5M 1G SHOKO
PL2024-2005  PMMA nominal Mp 1.5m 5g
PL2024-2010  PMMA nominal Mp 1.5m 10g

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
                      679 Springvale Road
                      Mulgrave
                      Victoria 3170, Australia
                      1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994
Section 2. Hazard(s) identification

Classification of the substance or mixture
Not classified.

GHS label elements

Signal word : No signal word.
Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.
Supplemental label elements : Not applicable.

Other hazards which do not result in classification : May form explosible dust-air mixture if dispersed. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition and ingredient information

Substance/mixture : Substance

CAS number/other identifiers

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>(w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propenoic acid, 2-methyl-, methyl ester, homopolymer</td>
<td>100</td>
<td>9011-14-7</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : 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 : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
- irritation
- redness

Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

Skin contact: No specific data.

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media: Use dry chemical powder.

Unsuitable extinguishing media: Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

Specific hazards arising from the chemical: May form explosible dust-air mixture if dispersed.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide

Special protective actions for fire-fighters: 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: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: 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 spill material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.

For emergency responders: 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".

Environmental precautions: Avoid dispersal of spill 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).

Methods and material for containment and cleaning up

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Section 6. Accidental release measures

**Methods for cleaning up:** 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.

**Section 7. Handling and storage**

**Precautions for safe handling**

**Protective measures:** 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 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:** 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.

**Conditions for safe storage, including any incompatibilities:** 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 oxidizing 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.

**Section 8. Exposure controls and personal protection**

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propenoic acid, 2-methyl-, methyl ester, homopolymer</td>
<td>ACGIH TLV (United States). Particulates Not Otherwise Specified (PNOS): 10 mg/m³ Form: Inhalable Particulates Not Otherwise Specified (PNOS): 3 mg/m³ Form: Respirable</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls:** Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, 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.

**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.

**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.
Section 8. Exposure controls and personal protection

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. If operating conditions cause high dust concentrations to be produced, use dust goggles.

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.

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.

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.

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.

Section 9. Physical and chemical properties

Appearance

Physical state: Solid. [Powder.]
Colour: White.
Odour: Not available.
Odour threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: Not available.
Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Lower and upper explosive limits: Not available.
Vapour pressure: Not available.
Vapour density: Not available.
Relative density: Not available.
Solubility: Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

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Section 10. Stability and reactivity

Conditions to avoid: 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 before transferring material. Prevent dust accumulation.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials, incompatible materials: Alkali, Amine.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity
Not available.

Irritation/Corrosion
Not available.

Sensitisation
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
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

Potential acute health effects

Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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Section 11. Toxicological information

**Eye contact**: Adverse symptoms may include the following:
- irritation
- redness

**Inhalation**: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

**Skin contact**: No specific data.

**Ingestion**: No specific data.

**General**: No known significant effects or critical hazards.

**Carcinogenicity**: Not available.

**Mutagenicity**: Not available.

**Teratogenicity**: Not available.

**Developmental effects**: Not available.

**Fertility effects**: Not available.

**Developmental effects**: Not available.

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

**Potential chronic health effects**
- **General**: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**
- Not available.

Section 12. Ecological information

**Toxicity**
- Not available.

**Persistence and degradability**
- Not available.

**Bioaccumulative potential**
- Not available.

**Mobility in soil**
- **Soil/water partition coefficient (Koc)**: Not available.

**Other adverse effects**: No known significant effects or critical hazards.
Section 13. Disposal considerations

Disposal methods: 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information
ADG / IMDG / IATA: Not regulated as Dangerous Goods according to the ADG Code.

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.

Transport in bulk according to Annex II of Marpol and the IBC Code: Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons
Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances
No listed substance

Australia inventory (AICS): All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)
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.

International lists

National inventory
Canada: All components are listed or exempted.
China: All components are listed or exempted.
Europe: Not determined.
Japan: Japan inventory (ENCS): All components are listed or exempted. Japan inventory (ISHL): Not determined.
Malaysia: Not determined.
New Zealand: All components are listed or exempted.

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Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
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<tbody>
<tr>
<td>Philippines</td>
<td>All components are listed or exempted.</td>
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<tr>
<td>Republic of Korea</td>
<td>All components are listed or exempted.</td>
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<td>Taiwan</td>
<td>All components are listed or exempted.</td>
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<tr>
<td>Turkey</td>
<td>Not determined.</td>
</tr>
<tr>
<td>United States</td>
<td>All components are listed or exempted.</td>
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</tbody>
</table>

Section 16. Any other relevant information

History
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Key to abbreviations:
- ADG = Australian Dangerous Goods
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- NOHSC = National Occupational Health and Safety Commission
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

References: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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