Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name/Trade Name: Polymethyl Methacrylate

Manufacturer: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Commercial Name(s): Acrylite; Acrypet; Acrysol ase; Crinothene; Delpet 50M; Delpet 60N; Delpet 80N; Diakon; Disapol M; Elvacite; Kallodent K; Kallodent 222; Kallodent clear; LPT; Lucite; Metaplex 4002T; Metaplex NO; Osteobond; Palacos; Paraglas; Perspex; Plexiglas; PMMA; Pontalite; Repairsin; Riston; Romacryl; Shinkolite; Sol 90; Sol 95; Stellon Pink; Sumipex B-MH; Sumipex LG; Sumipex LO; Sumipex B-MHD; Superacryl AE; Superacryl O; Tensol 7 Torex G; Vedril

Synonym: Methacrylic acid methyl ester polymers; Methyl methacrylate homopolymer; Methyl methacrylate polymer; Methyl methacrylate resin; Poly(methacrylic Acid Methyl Ester); Polymethyl Methacrylate (avg. M.W. 350,000)

Chemical Name: 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer

Chemical Family: Not available.

Chemical Formula: [CH2C(CH3)(CO2CH3)]n

Supplier: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Polymethyl Methacrylate</td>
<td>9011-14-7</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients: Not applicable.

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SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248
CALL (310) 516-8000

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

See Section 15.
### Section 3. Hazards Identification

| Potential Acute Health Effects | Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. |
| Potential Chronic Health Effects | CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition. |

### Section 4. First Aid Measures

| Eye Contact | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs. |
| Skin Contact | Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. |
| Serious Skin Contact | Not available. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Serious Inhalation | Not available. |
| Ingestion | Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Serious Ingestion | Not available. |

### Section 5. Fire and Explosion Data

| Flammability of the Product | May be combustible at high temperature. |
| Auto-Ignition Temperature | 304°C (579.2°F) |
| Flash Points | CLOSED CUP: >250°C (482°F). |
| Flammable Limits | Not available. |
| Products of Combustion | These products are carbon oxides (CO, CO2). |
| Fire Hazards in Presence of Various Substances | Slightly flammable to flammable in presence of heat. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. |
| Special Remarks on Fire Hazards | Material in powder form, capable of creating a dust explosion. As with most organic solids, fire is possible at elevated temperatures |
| Special Remarks on Explosion Hazards | Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |

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Section 6. Accidental Release Measures

Small Spill
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Dust respirator is needed only when handling the material in powdered form.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid. (Powdered solid. Crystalline powder. Beads solid.)

Odor
Not available.

Molecular Weight
Not available.

Taste
Not available.

pH (1% soln/water)
Not applicable.

Color
White.

Boiling Point
Not available.

Melting Point
Glass Transition Temperature (Tg) for catalog number P1875: 122 deg. C (midpoint).

Critical Temperature
Not available.

Specific Gravity
1.17 - 1.2 (Water = 1)

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Dispersion Properties
See solubility in water, acetone.

Solubility
Soluble in acetone.
Insoluble in cold water.
Soluble in Ethyl Acetate, esters, ketones, aromatics an glycol ethers.
Insoluble in alcohols, and aliphatic hydrocarbons.

Continued on Next Page
**Section 10. Stability and Reactivity Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Excess heat, incompatible materials, dust generation.</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents, acids.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Reactivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

**Section 11. Toxicological Information**

<table>
<thead>
<tr>
<th>Route of Entry</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of Entry</td>
<td>Inhalation. Ingestion.</td>
</tr>
<tr>
<td>Toxicity to Animals</td>
<td>LD50: Not available. LC50: Not available.</td>
</tr>
<tr>
<td>Chronic Effects on Humans</td>
<td>CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.</td>
</tr>
<tr>
<td>Other Toxic Effects on Humans</td>
<td>Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.</td>
</tr>
<tr>
<td>Special Remarks on Toxicity to Animals</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Chronic Effects on Humans</td>
<td>May cause cancer based on animal test data. Polymethyl Methacrylate caused tumors when implanted in rats and mice. It is considered and equivocal tumorigenic agent by RTECS and is not classifiable as to carcinogenicity in humans by IARC.</td>
</tr>
<tr>
<td>Special Remarks on Other Toxic Effects on Humans</td>
<td>Acute Potential Health Effects: Skin: Contact with powder may cause skin irritation. Eyes: Dust may cause eye irritation due to mechanical action. Inhalation: Inhalation of dust may cause respiratory tract due mechanical action. Ingestion: Expected to be a low hazard. May cause digestive tract irritation. Chronic Potential Health Effects: Skin: Repeated or prolonged skin contact may cause allergic contact dermatitis. Inhalation: Repeated or prolonged inhalation of dust may cause allergic or asthmatic reaction. Ingestion: Prolonged or repeated ingestion may affect the liver, kidneys, and brain (extrapolated from Methyl methacrylate)</td>
</tr>
</tbody>
</table>

**Section 12. Ecological Information**

| Ecotoxicity                        | Not available.                                                           |
| BOD5 and COD                       | Not available.                                                           |
| Products of Biodegradation         | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |
| Toxicity of the Products of Biodegradation | The product itself and its products of degradation are not toxic. |
| Special Remarks on the Products of Biodegradation | Not available. |
Section 13. Disposal Considerations

Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification
Not a DOT controlled material (United States).

Identification
Not applicable.

Special Provisions for Transport
Not applicable.

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
TSCA 8(b) inventory: Polymethyl Methacrylate

California Proposition 65
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations
EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances.
Canada: Listed on Canadian Domestic Substance List (DSL).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (KECI).
Philippines: Listed on National Inventory (PICCS).
Australia: Listed on AICS.

Other Classifications
WHMIS (Canada) Not controlled under WHMIS (Canada).
DSCL (EEC) This product is not classified according to the EU regulations. Not applicable.

HMIS (U.S.A.)
National Fire Protection Association (U.S.A.)
Health Hazard 1
Fire Hazard 1
Reactivity 0
Personal Protection E

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

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### Protective Equipment

- Gloves.
- Lab coat.
- Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Safety glasses.

## Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>P1913X</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Other Special Considerations**

Major Uses: Polymethyl Methacrylate is an acrylic resin polymer. It is used as an ingredient in adhesives, to fix prosthetic components in orthopedic surgery, for its molding properties in dentistry, in intraocular implants, in antibiotic-impregnated beads for implantation following bone debridement, and as membranes for hemodialysis.

Validated by Sonia Owen on 9/14/2011.  
Verified by Sonia Owen. 
Printed 9/14/2011.

CALL (310) 516-8000

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user’s responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.