1. Chemical Product and Company Identification

Epoxy.com # 697 MMA SL/Trowel Resin

Supplier:
Epoxy Systems, Inc.
20774 W Pennsylvania Ave.
Dunnellon, Florida 34431
USA

352-489-1666 (phone)
352-489-1625 (fax)

Product Information Number 1-352-489-1666
24 Hour Emergency Number, PERS 1-800-633-8353

Product Use: binder for floor-coating

2. Composition/Information on Ingredients

This material is classified as hazardous under OSHA regulations.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Reg. No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl methacrylate</td>
<td>80-62-6</td>
<td>30 - 60</td>
</tr>
<tr>
<td>2-ethylhexyl acrylate</td>
<td>103-11-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>butyldiglycol methacrylate</td>
<td>7328-22-5</td>
<td>10 - 30</td>
</tr>
<tr>
<td>substituted tertiary amine</td>
<td>trade secret</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>acrylic polymer</td>
<td>trade secret</td>
<td>15 - 40</td>
</tr>
</tbody>
</table>

NJTSR # 56705700001-6782P

See Section 8, Exposure Controls/Personal Protection

3. Hazards Identification

Emergency Overview

Color: colorless, highly turbid
Appearance: low-viscosity
Odor: sweet, ester-like
Material Safety Data Sheet

Flammable liquid and vapor.
May cause eye, skin and respiratory tract irritation.
May cause sensitisation by skin contact.
Danger of bursting of closed systems due to vigorous exothermic polymerization.

Primary Routes of Exposure
- Skin contact
- Eye contact
- Inhalation

Potential Health Effects

Inhalation
Inhalation may cause the following:
- irritation of the mucous membrane and upper respiratory tract
- headache
- nausea

Eye Contact
Causes eye irritation.

Skin Contact
Direct contact with material can cause the following:
- irritation
- sensitization
Prolonged or repeated skin contact can cause the following:
- defatting
- dermatitis
May be absorbed through the skin.

Ingestion
This product has a low order of acute oral toxicity based on animal test data.

Potential Environmental Effects
See SECTION 12, Ecological Information

4. First Aid Measures

First Aid Procedures

Inhalation
Remove to fresh air. If breathing is difficult, get medical attention.

Eye Contact
In case of contact, immediately flush eyes with plenty of water. Get immediate medical attention.

Skin Contact
Immediately wash skin with soap and plenty of water. Remove contaminated clothing and shoes. If irritation persists, call a physician. Wash clothing before reuse.

Ingestion
If symptoms develop get medical attention. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

Note to Physician
Excessive or prolonged exposure can cause the following: Headache, confusion, irritation. Product has dermal defatting effect
5. Fire-Fighting Measures

Flash point 10 °C (DIN 51755) (methyl methacrylate)
50 °C (DIN 51755) (methyl methacrylate)

Ignition temperature 430 °C (DIN 51794) (methyl methacrylate)
806 °F (DIN 51794) (methyl methacrylate)

Lower explosion limit 2.1 % (V) at 10,5°C / 33.8°F (MMA)

Upper explosion limit 12.5 % (V) (methyl methacrylate)

OSHA Flammability Classification Flammable liquid

Other Flammable Properties Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

Unusual Hazards May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition.

Extinguishing Media Use the following extinguishing media when fighting fires involving this material:
dry chemical - carbon dioxide - foam

Fire Fighting Procedures As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. Accidental Release Measures

Procedures Remove sources of ignition and ventilate area. All equipment used when handling the product must be grounded. Absorb spill with inert material and place in a chemical waste container. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. See Material Safety Data Sheet section 8, Exposure Controls/Personal Protection.

7. Handling and Storage

Handling Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Container hazardous when empty. Follow all MSDS/label precautions even after the container is emptied. Emptied container retains vapor and product residue. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

Storage Keep in the original container at a temperature not exceeding 30 °C (86 °F). Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Store in a cool, dry place. Keep container closed. Protect from the action of light. Can polymerize with intense heat release.
Other
Improper disposal or re-use of this container may be dangerous and illegal.

8. Exposure Controls/Personal Protection

Exposure Limit Information

**METHYL METHACRYLATE**
(CAS Number 80-62-6 )
Carcinogen designation(s) USA: EPA-NL; IARC-3; TLV-A4

<table>
<thead>
<tr>
<th>Occupational Exposure Values</th>
<th>Remark(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV-TWA 50 ppm 205 mg/m3</td>
<td>Sensitiser</td>
</tr>
<tr>
<td>ACGIH TLV-STEL 100 ppm 410 mg/m3</td>
<td>Sensitiser</td>
</tr>
<tr>
<td>OSHA PEL-TWA 100 ppm 410 mg/m3</td>
<td></td>
</tr>
<tr>
<td>OSHA PEL-STEL 100 ppm 410 mg/m3</td>
<td>not established</td>
</tr>
<tr>
<td>OEL-TWA (Alberta) 50 ppm 205 mg/m3</td>
<td></td>
</tr>
<tr>
<td>OEL-STEL (Alberta) 100 ppm 410 mg/m3</td>
<td></td>
</tr>
<tr>
<td>OEL-TWA (British Columbia) 50 ppm</td>
<td>Capable of causing respiratory, dermal or conjunctival sensitization.</td>
</tr>
<tr>
<td>OEL-STEL (British Columbia) 100 ppm</td>
<td>Capable of causing respiratory, dermal or conjunctival sensitization.</td>
</tr>
<tr>
<td>OEL-TWA (Ontario) 50 ppm</td>
<td></td>
</tr>
<tr>
<td>OEL-STEL (Ontario) 100 ppm</td>
<td></td>
</tr>
<tr>
<td>OEL-TWA (Quebec) 50 ppm 205 mg/m3</td>
<td>Sensitiser</td>
</tr>
<tr>
<td>OEL-STEL (Quebec) 100 ppm</td>
<td>not established</td>
</tr>
<tr>
<td>OEL-TWA (Mexico) 100 ppm 410 mg/m3</td>
<td>Carcinogen Category 4 - not classifiable as a human carcinogen</td>
</tr>
<tr>
<td>OEL-STEL (Mexico) 125 ppm 510 mg/m3</td>
<td>Carcinogen Category 4 - not classifiable as a human carcinogen</td>
</tr>
</tbody>
</table>

**2-ETHYLHEXYL ACRYLATE**
(CAS Number 103-11-7 )
No Occupational Exposure Values established (ACGIH, OSHA, Canada and Mexico).

**BUTYLDIGLYCOL METHACRYLATE**
(CAS Number 7328-22-5 )
No Occupational Exposure Values established (ACGIH, OSHA, Canada and Mexico).

**STODDARD SOLVENT (WHITE OIL)**
(CAS Number 8052-41-3 )

<table>
<thead>
<tr>
<th>Occupational Exposure Values</th>
<th>Remark(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV-TWA 100 ppm 525 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV-STEL</td>
<td>not established</td>
</tr>
<tr>
<td>OSHA PEL-TWA 500 ppm 2,900 mg/m3</td>
<td></td>
</tr>
<tr>
<td>OSHA PEL-STEL</td>
<td>not established</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

OEL-TWA (Alberta) 100 ppm 572 mg/m³
OEL-STE L (Alberta) not established
OEL-TWA (British Columbia) 290 mg/m³
OEL-STE L (British Columbia) 580 mg/m³
OEL-TWA (Ontario) 525 mg/m³
OEL-STE L (Ontario) not established
OEL-TWA (Quebec) 100 ppm 525 mg/m³
OEL-STE L (Quebec) not established
OEL-TWA (Mexico) 100 ppm 523 mg/m³
OEL-STE L (Mexico) 200 ppm 1,050 mg/m³

Engineering Controls (Ventilation)
Provide general and/or local exhaust ventilation to maintain airborne levels below the exposure limits in Section 8. Refer to the current edition of 'Industrial Ventilation: A Manual of Recommended Practice' published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Respiratory Protection
A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Eye Protection
Use safety glasses (ANSI Z87.1 or approved equivalent).

Skin Protection
Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Hand Protection
butyl rubber gloves
Gloves should be replaced regularly, especially after extended contact with the product.
For each workplace a suitable glove type has to be selected.

Other Protective Equipment
A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

9. Physical and Chemical Properties

Appearance colorless, highly turbid
Physical state low-viscosity
Odor sweet, ester-like
Flash point 10 °C (DIN 51755) (methyl methacrylate)
50 °F (DIN 51755) (methyl methacrylate)

pH-value not applicable
Viscosity (dynamic) 175 - 375 mPa·s at 23 °C / 73 °F (Brookfield)
10. Stability and Reactivity

Stability
This product is stable under normal storage conditions.

Conditions To Avoid
See 'Hazardous Polymerization' for conditions to avoid.

Incompatibility With Other Materials
Reducing agents. Tertiary amines. Heavy metals. peroxides Free radical initiators. oxidizing agents
Mineral acids.

Hazardous Decomposition Products
None when used as directed.

Hazardous Polymerization
The product is normally supplied in a stabilized form. If the permissible storage period and/or storage
temperature is noticeably exceeded, the product may polymerize with heat evolution.

11. Toxicological Information

Acute Oral Toxicity
LD50 rat, OECD 401 Related to substance: methyl methacrylate
> 5,000 mg/kg

LD50 rat Related to substance: 2-ethylhexyl acrylate
> 2,000 mg/kg

Acute Inhalational Toxicity
LC50 rat, 4 h Related to substance: methyl methacrylate
29.8 mg/l

LC10 mouse Related to substance: 2-ethylhexyl acrylate
0.6 mg/l

Acute Dermal Toxicity
LD50 rabbit Related to substance: methyl methacrylate
> 5,000 mg/kg
LD50 rabbit  
Related to substance: 2-ethylhexyl acrylate  
> 5,000 mg/kg

**Irritant Effect on the Skin**

Properties of components in summary.
Related to substance: product

**Irritant Effect on the Eyes**

Contact with the eyes may cause irritation. Properties of components in summary.
Related to substance: product

**Sensitization**

In sensitization tests on guinea pigs with and without adjuvant, both positive and negative results were found. In humans various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affections).
Related to substance: methyl methacrylate
May cause sensitisation by skin contact.
Related to substance: 2-ethylhexyl acrylate

**Toxicity on Repeated Administration**

Dose ad which no adverse effects were observed (NOAEL). At higher doses adverse effects were observed.

rat, inhalation  
Findings: Damage to mucous membranes in the nose at 400 ppm
Related to substance: methyl methacrylate

NOAEL 25 ppm

rat, in drinking water  
Findings: no toxic effects
Related to substance: methyl methacrylate

NOAEL 2000 ppm

**Mutagenicity**

Positive as well as negative results in *in vitro* mutagenicity/ genotoxicity tests.
No experimental indication of genotoxicity *in vivo* available.
In summary not mutagenic according to internationally accepted criteria.
Related to substance: methyl methacrylate

**Carcinogenicity**

Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.
Related to substance: methyl methacrylate

**Reprotoxicity / teratogenicity**

No indications of teratogenic effects in experimental animals.
Related to substance: methyl methacrylate

**Further Information on Toxicology**

There are no toxicological data available for the product as such. Avoid contact with the skin and eyes and inhalation of the product vapours.

---

**12. Ecological Information**

**Information on Elimination (Persistence and Degradability)**

**Biodegradability**

biodegradable  
(monomer constituent)

**Bioaccumulation**
no evidence for hazardous properties

**Ecotoxicological Effect**

**Fish Toxicity**
- LC50 Oncorhync hus mykiss, rainbow trout, OECD 203, flow through, GLP, 96 h
- Related to substance: methyl methacrylate

**Daphnia Toxicity**
- EC50 Daphnia magna, OECD 202, flow through, 48 h
- Related to substance: methyl methacrylate
- NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d
- Related to substance: methyl methacrylate
- Related to substance: 2-ethylhexyl acrylate

**Algae Toxicity**
- EC3 Scenedesmus quadricauda, cell proliferation inhibition test, 8 d
- Related to substance: methyl methacrylate

**Bacteria Toxicity**
- EC0 Pseudomonas putida
- Related to substance: methyl methacrylate

**Further Information on Ecology**
- Prevent substance from entering soil, natural bodies of water and sewer systems.

---

**13. Disposal Considerations**

**Procedures**
- Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

---

**14. Transport Information**

**US DOT Hazard Classification**
- Proper Shipping Name: RESIN SOLUTION
- Hazard Class: 3
- ID/UN Number: 1866
- Packing Group: II

**Canadian TDG Classification**
- Refer to the classification US DOT

**Shipment by sea IMDG/GGVSee**
- UN number: 1866
- Class: 3
15. Regulatory Information

INVENTORY INFORMATION

REACH (EU)     preregistered, registered or exempted
TSCA (USA)      listed or exempted
DSL (CDN)       not listed
METI (J)        listed or exempted
ECL (KOR)       listed or exempted
IECSC (CN)      listed or exempted
HSNO (NZ)       listed or exempted
                HSR002669, Surface Coatings and Colorants (Flammable, Toxic
                [6.7]) Group Standard 2006

US FEDERAL REGULATORY INFORMATION

Component / CASRN TPQ [lbs] CERCLARQ[lbs] (40CFR302.4) SARA 302 List of EHS SARA 313 (40CFR372) TSCA 12b
methyl methacrylate / 80-62-6 NONE 1000 NO YES NO

COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112

Component / CASRN Weight % HAP EHAP
methyl methacrylate / 80-62-6 30 - 60 YES NO

PRODUCT CLASSIFICATION UNDER SECTION 311/312 OF SARA (40CFR370)

ACUTE, FIRE, REACTIVE,
### US STATE REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>Component / CASRN</th>
<th>New Jersey RTK</th>
<th>Pennsylvania RTK</th>
<th>Massachusetts RTK</th>
<th>California Proposition 65 Cancer</th>
<th>California Proposition 65 Reproductive</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl methacrylate / 80-62-6</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>2-ethylhexyl acrylate / 103-11-7</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>butyldiglycol methacrylate / 7328-22-5</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>acrylic polymer / trade secret</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>substituted tertiary amine / trade secret</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

### CANADIAN REGULATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the MSDS contains all information required by the Controlled Products Regulations.

For Research and Development Only.  
**WHMIS:** B2, D2B

<table>
<thead>
<tr>
<th>Component / CASRN</th>
<th>NPRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl methacrylate / 80-62-6</td>
<td>YES</td>
</tr>
<tr>
<td>2-ethylhexyl acrylate / 103-11-7</td>
<td>NO</td>
</tr>
<tr>
<td>methacrylic acid ester / trade secret</td>
<td>NO</td>
</tr>
</tbody>
</table>
16. Other Information

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS-Ratings</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>NFPA-Ratings</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

HMIS Hazard Ratings

- 4 = severe
- 3 = serious
- 2 = moderate
- 1 = slight
- 0 = minimal
- N = no rating for powders
- * = chronic health hazard

NFPA Hazard Ratings

- 4 = extreme
- 3 = high
- 2 = moderate
- 1 = slight
- 0 = insignificant
- N = no rating for powders

This MSDS was prepared in accordance with ANSI Z400.1-1998.

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Epoxy Systems, Inc. assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. Epoxy Systems, Inc EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF Epoxy Systems, Inc. IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Epoxy Systems, Inc. reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

Date of printing: 08/25/15