1. Chemical Product and Company Identification

EPOXY.COM PRODUCT #689 MMA MV/WET Area Sealer

Synonyms: Solution of an acrylic polymer in methacrylic acid esters / acrylic acid esters

Supplier: 800-633-8253
EPOXY SYSTEMS, INC – dba EPOXY.COM
20774 W. Pennsylvania Ave. Dunnellon, FL 34431
USA

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

Product Information Number 352-489-1666
24 Hour Emergency Number, PERS 1-800-633-8253 (USA); 1-801-629-0677 (International)

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>40 - 70</td>
</tr>
<tr>
<td>2-ethylhexyl acrylate</td>
<td>103-11-7</td>
<td>7 - 13</td>
</tr>
<tr>
<td>acrylic polymer</td>
<td></td>
<td>trade secret</td>
</tr>
<tr>
<td>methacrylic acid ester</td>
<td></td>
<td>trade secret</td>
</tr>
<tr>
<td>substituted tertiary amine</td>
<td></td>
<td>trade secret</td>
</tr>
</tbody>
</table>

NJTSR # 80100103-5142P

See Section 8, Exposure Controls/Personal Protection

3. Hazards Identification

Emergency Overview

Color: bluish, slightly turbid
Appearance: liquid
Odor: ester-like
Flammable liquid and vapor. May be ignited by heat, sparks or flame. Vapors can travel to a source of ignition and flash back. Danger of bursting of closed systems due to vigorous exothermic polymerization. Avoid uncontrolled polymerization. May cause eye, skin and respiratory tract irritation. May cause sensitisation by skin contact. Container may explode when heated.

Primary Routes of Exposure
- Inhalation
- Skin contact

Potential Health Effects

Inhalation
- May cause irritation to the respiratory tract.

Eye Contact
- May cause eye irritation.

Skin Contact
- May cause irritation and sensitization of the skin.
- Not expected to be absorbed through the skin in toxic amounts.

Ingestion
- Expected to be slightly toxic by ingestion.

Chronic Effects
- No chronic (long-term) effects are known for humans.

Aggravated Medical Conditions
- Conjunctivitis of the eye, dermatitis of the skin, asthma and respiratory diseases.

Potential Environmental Effects
- See SECTION 12, Ecological Information

4. First Aid Measures

First Aid Procedures

Inhalation
- Remove to fresh air. Obtain medical attention if irritation develops or persists. If breathing is difficult, give oxygen.

Eye Contact
- In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Hold eyelids apart during flushing to ensure rinsing of the entire surface of the eye with water. Obtain medical attention if irritation develops or persists. DO NOT WEAR CONTACT LENSES WHEN USING THIS PRODUCT.

Skin Contact
- Wash off with water and soap. Obtain medical attention if irritation develops or persists.

Ingestion
- If swallowed, call a Poison Control Centre or doctor immediately.

Note to Physician
- May cause eye/skin irritation. Skin Sensitisation, Excessive or prolonged exposure can cause the following; headache, Numbness
5. Fire-Fighting Measures

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

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

Lower explosion limit 2.1 %(V) (methyl methacrylate) at 10.5°C

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

OSHA Flammability Classification Flammable liquid

Other Flammable Properties
Vapours are heavier than air and can form an explosive mixture with air. Vapors can travel to a source of ignition and flash back.

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 - alcohol-resistant foam

Fire Fighting Procedures
Evacuate enclosed and surrounding areas. As in any fire, wear self-contained breathing apparatus pressure-demand and, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool containers exposed to fire and disperse vapors. Keep spills away from sources of ignition.

6. Accidental Release Measures

Procedures
Remove sources of ignition and ventilate area. 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. Use personal protective equipment. See Material Safety Data Sheet section 8, Exposure Controls/Personal Protection.

7. Handling and Storage

Handling
Product is supplied in a stabilized form. Stir well before decanting from drum. Avoid contact with eyes, skin and clothing. Use explosion-proof equipment. Ground and bond containers when transferring material. Use with adequate ventilation. Open valve slowly to avoid pressure shock. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.

Storage
Keep away from sparks, flames and other sources of ignition. Keep container closed when not in use. Ensure there is good room ventilation. Limit storage of flammable liquids to approved areas equipped with overhead sprinklers. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container. Keep away from heat. Keep in the original container at a temperature not exceeding 35 °C (95 °F). Do not store in direct sunlight.
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</td>
<td>50 ppm  205 mg/m³ Sensitiser</td>
</tr>
<tr>
<td>ACGIH TLV-STE L</td>
<td>100 ppm 410 mg/m³ Sensitiser</td>
</tr>
<tr>
<td>OSHA PEL-TWA</td>
<td>100 ppm 410 mg/m³</td>
</tr>
<tr>
<td>OSHA PEL-STE L</td>
<td></td>
</tr>
<tr>
<td>OEL-TWA (Alberta)</td>
<td>50 ppm  205 mg/m³</td>
</tr>
<tr>
<td>OEL-STE L (Alberta)</td>
<td>100 ppm 410 mg/m³</td>
</tr>
<tr>
<td>OEL-TWA (British Columbia)</td>
<td>50 ppm  Capable of causing respiratory, dermal or conjunctival sensitization.</td>
</tr>
<tr>
<td>OEL-STE L (British Columbia)</td>
<td>100 ppm Capable of causing respiratory, dermal or conjunctival sensitization.</td>
</tr>
<tr>
<td>OEL-TWA (Ontario)</td>
<td>50 ppm</td>
</tr>
<tr>
<td>OEL-STE L (Ontario)</td>
<td>100 ppm</td>
</tr>
<tr>
<td>OEL-TWA (Quebec)</td>
<td>50 ppm  205 mg/m³ Sensitiser</td>
</tr>
<tr>
<td>OEL-STE L (Quebec)</td>
<td></td>
</tr>
<tr>
<td>OEL-TWA (Mexico)</td>
<td>100 ppm 410 mg/m³ Carcinogen Category 4 - not classifiable as a human carcinogen</td>
</tr>
<tr>
<td>OEL-STE L (Mexico)</td>
<td>125 ppm  510 mg/m³ 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).

Engineering Controls (Ventilation)
In industrial situations, concentration values below TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe airborne concentrations of mists, dust or vapours are high, you are advised to modify the process or environment to reduce the problem.

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 chemical splash goggles and face shield (ANSI Z87.1) or approved equivalent.

Skin Protection
On handling of larger quantities: face mask, chemical-resistant boots and apron.
Hand Protection
Use supported neoprene gloves for routine work and butyl rubber gloves when there is a probability of liquid contact. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>bluish, slightly turbid</td>
</tr>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>ester-like</td>
</tr>
<tr>
<td>Flash point</td>
<td>10 °C ( DIN 51755 ) (methyl methacrylate)</td>
</tr>
<tr>
<td></td>
<td>50 °F ( DIN 51755 ) (methyl methacrylate)</td>
</tr>
<tr>
<td>pH-value</td>
<td>not applicable</td>
</tr>
<tr>
<td>Viscosity (dynamic)</td>
<td>180 - 250 mPa·s at 23 °C / 73 °F (Brookfield)</td>
</tr>
<tr>
<td>Specific gravity (water = 1)</td>
<td>0.979 g/cm³ at 20 °C / 68 °F ( DIN 51757 )</td>
</tr>
<tr>
<td>Vapor density (air = 1)</td>
<td>&gt; 1 at 20 °C / 68 °F</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>ca. 40 hPa (= mbar) at 20 °C / 68 °F</td>
</tr>
<tr>
<td>Freezing Temperature</td>
<td>-48 °C / -54 °F (methyl methacrylate)</td>
</tr>
<tr>
<td></td>
<td>Paraffin Separation &lt; 15°C</td>
</tr>
<tr>
<td>Boiling Temperature</td>
<td>ca. 100 °C / 212 °F at 1,013 hPa (= mbar)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>ca. 20 g/l at 20 °C / 68 °F</td>
</tr>
<tr>
<td>n-Octanol/water partition coefficient</td>
<td>not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>is faster than butyl acetate</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>&lt; 1 ppm</td>
</tr>
<tr>
<td>Further information</td>
<td>none</td>
</tr>
</tbody>
</table>

See Section 5, Fire Fighting Measures

10. Stability and Reactivity

Stability
This product is stable under normal storage conditions.

Conditions To Avoid
Heat and ignition sources, aging, contamination, oxygen free atmosphere. Ultraviolet light.

Incompatibility With Other Materials
Peroxides, amines, sulfur compounds, heavy metal ions, alkalis, reducing agents and oxidizing agents.

Hazardous Decomposition Products
None when used as directed.
11. Toxicological Information

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

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

LD50 rat > 2,000 mg/kg
(analogy)
Related to substance: butyldiglycol methacrylate

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

LCL0 mouse 0.6 mg/l
Related to substance: 2-ethylhexyl acrylate

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

LD50 rabbit > 5,000 mg/kg
Related to substance: 2-ethylhexyl acrylate

Irritant Effect on the Skin
(irritating)
Contact with skin may cause irritations. 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
May cause sensitisation by skin contact.
Related to substance: 2-ethylhexyl acrylate

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

Toxicity on Repeated Administration
NOAEL 25 ppm
rat, inhalation
Findings: Damage to mucous membranes in the nose at 400 ppm
Related to substance: methyl methacrylate
Material Safety Data Sheet

Update: 08/31/2021
Version: 1.0

Epoxy.com #689

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

NOAEL 2000 ppm

Mutagenicity
Positive as well as negative results in \textit{in vitro} mutagenicity/ genotoxicity tests.
No experimental indication of genotoxicity \textit{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
No indications of toxic effects were observed in reproduction studies in 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.
Avoid contact with the skin and eyes and inhalation of the product vapours.
Methaemoglobinemia possible after skin contact.
Symptoms of poisoning may occur many hours after contact.
Possibility of liver damage.
Related to substance: N,N-dimethyl-p-toluidine

12. Ecological Information

Information on Elimination (Persistence and Degradability)

Biodegradability
biodegradable
(monomer constituent)

Bioaccumulation
no evidence for hazardous properties

Ecotoxicological Effect

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

> 79 mg/l

Daphnia Toxicity

EC50 Daphnia magna, OECD 202, flow through, 48 h
Related to substance: methyl methacrylate
69 mg/l

NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d
Related to substance: methyl methacrylate
37 mg/l

EC50 Daphnia magna, 48 h
(analogy)
Related to substance: product

> 100 mg/l
Algae Toxicity
- EC3 Scenedesmus quadricauda, cell proliferation inhibition test, 8 d
  Related to substance: methyl methacrylate
- EC50 Desmodesmus subspicatus, 48 h (analogy)
  Related to substance: product

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
- ERG: 127

Canadian TDG Classification
- Refer to the classification US DOT

Shipment by sea IMDG/GGVSee
- UN number: 1866
- Class: 3
- EmS: F-E, S-E
- Marine pollutant: No
- Packaging group: II
- Proper Shipping Name: RESIN SOLUTION

Air transport ICAO/IATA
- UN number: 1866
- Class: 3
- Packing Group: II
- Proper Shipping Name: RESIN SOLUTION
15. Regulatory Information

**INVENTORY INFORMATION**

<table>
<thead>
<tr>
<th>Material</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH (EU)</td>
<td>preregistered, registered or exempted</td>
</tr>
<tr>
<td>TSCA (USA)</td>
<td>listed or exempted</td>
</tr>
<tr>
<td>DSL (CDN)</td>
<td>listed or exempted</td>
</tr>
<tr>
<td>AICS (AUS)</td>
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</tr>
<tr>
<td>METI (J)</td>
<td>listed or exempted</td>
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<tr>
<td>ECL (KOR)</td>
<td>listed or exempted</td>
</tr>
<tr>
<td>PICCS (RP)</td>
<td>listed or exempted</td>
</tr>
<tr>
<td>IECS (CN)</td>
<td>listed or exempted</td>
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<tr>
<td>HSNO (NZ)</td>
<td>listed or exempted</td>
</tr>
<tr>
<td>ECS (Taiwan)</td>
<td>HSR001626</td>
</tr>
</tbody>
</table>

**US FEDERAL REGULATORY INFORMATION**

<table>
<thead>
<tr>
<th>Component / CASRN</th>
<th>TPQ [lbs]</th>
<th>CERCLARQ [lbs]</th>
<th>SARA 302</th>
<th>SARA 313</th>
<th>TSCA 12b</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl methacrylate /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80-62-6</td>
<td>NONE</td>
<td>1000</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

**COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112**

<table>
<thead>
<tr>
<th>Component / CASRN</th>
<th>Weight %</th>
<th>HAP</th>
<th>EHAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl methacrylate /</td>
<td></td>
<td>YES</td>
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</tr>
<tr>
<td>80-62-6</td>
<td></td>
<td></td>
<td>NO</td>
</tr>
</tbody>
</table>

**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 /</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>80-62-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-ethylhexyl acrylate /</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>103-11-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>methacrylic acid ester /</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
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<tr>
<td>trade secret</td>
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</tr>
<tr>
<td>acrylic polymer</td>
<td>NO</td>
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<td>NO</td>
</tr>
<tr>
<td>substituted tertiary amine/</td>
<td>NO</td>
<td>NO</td>
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</tr>
<tr>
<td>trade secret</td>
<td></td>
<td></td>
<td></td>
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</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.

This is a controlled product.
WHMIS: B2,D2B

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

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS-Ratings</td>
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<td>3</td>
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<tr>
<td>NFPA-Ratings</td>
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<td>3</td>
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<table>
<thead>
<tr>
<th>HMIS Hazard Ratings</th>
<th>NFPA Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 = severe</td>
<td>4 = extreme</td>
</tr>
<tr>
<td>3 = serious</td>
<td>3 = high</td>
</tr>
<tr>
<td>2 = moderate</td>
<td>2 = moderate</td>
</tr>
<tr>
<td>1 = slight</td>
<td>1 = slight</td>
</tr>
<tr>
<td>0 = minimal</td>
<td>0 = insignificant</td>
</tr>
<tr>
<td>N = no rating for powders</td>
<td>N = no rating for powders</td>
</tr>
<tr>
<td>* = chronic health hazard</td>
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</tbody>
</table>

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

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