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

- **Product identifier**
- **Trade name:** Epoxy.com Product #684LV MMA Crack Sealer

- **Application of the substance / the preparation** Coating material

- **Details of the supplier of the safety data sheet**
- **Supplier:**
  Epoxy Systems, Inc.
  20774 W Pennsylvania Ave
  Dunnellon, FL 34421
  Tel.: +1 352-489-1666
  Fax.: +1 352-489-1625

- **Information department:**
  Norm Lambert, Tel.: +1 352-533-2167
  email:norm@epoxy.com
- **Emergency telephone number:** PERS : +1 800 533 8253

2 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Resin mixture.

- **Dangerous components:**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical Name</th>
<th>EINECS</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate</td>
<td>201-297-1</td>
<td>50-100%</td>
</tr>
<tr>
<td></td>
<td>Xi R37/38-43; F R11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H225; H315; H317; H335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>868-77-9</td>
<td>2-hydroxyethyl methacrylate</td>
<td>212-782-2</td>
<td>2.5-10%</td>
</tr>
<tr>
<td></td>
<td>Xi R36/38-43</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H315; H319; H317</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38668-48-3</td>
<td>1,1'-[p-tolylimino]diopropan-2-ol</td>
<td>254-075-1</td>
<td>&lt; 2.5%</td>
</tr>
<tr>
<td></td>
<td>T R25; Xi R41</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>R52/53</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H301; H318; H402; H412</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150-76-5</td>
<td>mequinol</td>
<td>205-769-8</td>
<td>&lt; 2.5%</td>
</tr>
<tr>
<td></td>
<td>X n R22; Xi R36-43</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H302; H319; H317</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Classification of the substance or mixture**
  - **GHS02 Flame**
    - H225 Highly flammable liquid and vapour.
  - **GHS07**
    - H315 Causes skin irritation.
    - H319 Causes serious eye irritation.
    - H317 May cause an allergic skin reaction.
    - H335 May cause respiratory irritation.
    - H313 May be harmful in contact with skin.
    - H333 May be harmful if inhaled.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  - Xi: Irritant
    - R37/38-43: Irritating to respiratory system and skin. May cause sensitization by skin contact.
Trade name: **Epoxy.com Product #684LV MMA Crack Sealer**

- **F**: Highly flammable
- **R11**: Highly flammable.

### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

### Label elements

- **Labelling according to EU guidelines:**
  The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**
  
  ![Xi Irritant](image1)
  ![F Highly flammable](image2)

- **Hazard-determining components of labelling:**
  methyl methacrylate
  2-hydroxyethyl methacrylate

- **Risk phrases:**
  11 Highly flammable.
  37/38 Irritating to respiratory system and skin.
  43 May cause sensitization by skin contact.

- **Safety phrases:**
  9 Keep container in a well-ventilated place.
  16 Keep away from sources of ignition - No smoking.
  23 Do not breathe fumes
  24 Avoid contact with skin.
  28 After contact with skin, wash immediately with plenty of soap and water
  33 Take precautionary measures against static discharges.
  37 Wear suitable gloves.
  43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
  60 This material and its container must be disposed of as hazardous waste.

- **Classification system**

- **NFPA ratings (scale 0-4)**
  
  ![Health = 1](image3)
  ![Fire = 3](image4)
  ![Reactivity = 0](image5)

### 4 First aid measures

- **General information** Take affected persons out into the fresh air.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** If skin irritation continues, consult a doctor.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Rinse out mouth and then drink plenty of water.
- **Information for doctor** No particular measures are known - treat according to symptoms.
- **Danger** Condition may deteriorate with alcohol consumption.

### 5 Firefighting measures

- **Suitable extinguishing agents**
  
  CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Keep people at a distance and stay upwind.
  Wear protective equipment. Keep unprotected persons away.
  Keep away from ignition sources
- Environmental precautions:
  Do not allow to penetrate the ground/soil.
  Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents
- Reference to other sections Clean the accident area carefully.

7 Handling and storage

- Handling
- Precautions for safe handling
  Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
  Keep receptacles tightly sealed.
  Store in cool, dry place in tightly closed receptacles.
  Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires:
  Fumes can combine with air to form an explosive mixture.
  Flammable gas-air mixtures may be formed in empty receptacles.
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- Storage
  Requirements to be met by storerooms and receptacles:
  Suitable material for receptacles and pipes: glass.
  Suitable material for receptacles and pipes: Aluminium.
  Suitable material for receptacles and pipes: steel or stainless steel.
  Store only in the original receptacle.
  Provide solvent resistant, sealed floor.
  Store in a cool location.
- Information about storage in one common storage facility:
  Do not store together with oxidizing or spontaneously flammable materials.
  Store away from foodstuffs.
- Further information about storage conditions:
  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.
## Epoxy.com Product #684LV MMA Crack Sealer

### Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL (mg/m³, 1 ppm)</th>
<th>REL (mg/m³, 100 ppm)</th>
<th>TLV Short-term value: (mg/m³, 100 ppm)</th>
<th>Long-term value: (mg/m³, 50 ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6 methyl methacrylate (50-100%)</td>
<td>410</td>
<td>410</td>
<td>410</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>REL (mg/m³)</th>
<th>TLV (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffine (&lt; 2.5%)</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

### Additional information: The lists that were valid during the creation were used as basis.

### Personal protective equipment

- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

### Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

### Recommended filter device for short term use:

- Filter AX

### Protection of hands:

- Only use chemical-protective gloves with CE-labelling of category III.

### Material of gloves

- Butyl rubber, BR
  - Recommended thickness of the material: ≥ 0.5 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### Penetration time of glove material

- The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

### As protection from splashes gloves made of the following materials are suitable: PVC gloves

### Not suitable are gloves made of the following materials:

- Strong gloves
- Leather gloves
9 Physical and chemical properties

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Fluid</td>
</tr>
<tr>
<td>Color: Colorless</td>
</tr>
<tr>
<td>Odor: Ester-like</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
</tr>
<tr>
<td>Flash point:</td>
</tr>
<tr>
<td>Ignition temperature:</td>
</tr>
<tr>
<td>Auto igniting:</td>
</tr>
<tr>
<td>Danger of explosion:</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Vapor pressure at 20 °C (68 °F):</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F):</td>
</tr>
<tr>
<td>Solvent content:</td>
</tr>
<tr>
<td>Other information</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Incompatible materials:
  - strong oxidizing agents
  - strong acids
- Hazardous decomposition products: Flammable gases/vapors

11 Toxicological information

- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    | 80-62-6 methyl methacrylate |
    | Dermal LD50                | > 5000 mg/kg (rab) |
    | Inhalative LC50/4 h        | 7093 mg/l (rat)    |
    | 868-77-9 2-hydroxyethyl methacrylate |
    | Dermal LD50               | > 5000 mg/kg (rab) |
Trade name: Epoxy.com Product #684LV MMA Crack Sealer

- **Primary irritant effect:**
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: slight irritative effect possible
- **Sensitization:** Sensitization possible through skin contact.
- **Subacute to chronic toxicity:**
  - no carcinogenic effect admits
  - no mutagenic effect admits
  - no reproduction-toxic effect admits
- **Additional toxicological information:**
  - Inhalation of concentrated vapors as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.
  - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Irritant

### 12 Ecological information

- **Acquatic toxicity:**
  - 80-62-6 methyl methacrylate
    - BSB5-Wert 0.14 g/g (-)
    - EC0 100 mg/l (Pseudomonas putida)
    - EC3 (192h) 37 mg/l (Scenedesmus quadicauda)
    - EC50 (96h) 170 mg/l (Selenastrum capricornutum)
    - (48h) 69 mg/l (daphnia)
    - LC50 350 mg/l (Leuciscus idus)
    - LC50 (96h) >79 mg/l (Onchorhynchus mykiss)
    - 232 mg/l (Lepomis macrochirus (bluegill))
    - 277 mg/l (Carassius auratus (Goldfisch))
  - 38668-48-3 1,1'-((p-tolylimino)dipropan-2-ol
    - BSB-5 11 mg O2/g (-)
    - CSB 2360 mg O2/g (-)
    - EC50 (48h) 28.8 mg/l (Daphnia magna)

- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
  - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
14 Transport information

- **UN-Number**
  - DOT UN1866
  - ADR, IMDG, IATA 1866

- **UN proper shipping name**
  - DOT, IATA RESIN SOLUTION
  - ADR 1866 RESIN SOLUTION
  - IMDG RESIN SOLUTION (METHYL METHACRYLATE MONOMER, STABILIZED)

- **Transport hazard class(es)**
  - DOT, IMDG, IATA

  - **Class** 3 Flammable liquids.
  - **Label** 3

- **ADR**

  - **Class** 3 (F1) Flammable liquids
  - **Label** 3

- **Packing group**
  - DOT, ADR, IMDG, IATA II

- **Environmental hazards:**
  - No

- **Marine pollutant:**
  - No

- **Special precautions for user**
  - Warning: Flammable liquids

- **Danger code (Kmeler):**
  - 33

- **EMS Number:**
  - F-E-S-E

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - Not dangerous according to the above specifications.

- **UN "Model Regulation":**
  - UN1866, RESIN SOLUTION, 3, II

15 Regulatory information

- **Cancerogeneity categories**

  - **EPA (Environmental Protection Agency)**
    - 80-62-6 methyl methacrylate NL
    - 111-76-2 2-butoxyethanol CBD

  - **IARC (International Agency for Research on Cancer)**
    - 80-62-6 methyl methacrylate 3
    - 128-37-0 2,6-di-tert-butyl-p-cresol 3
    - 111-76-2 2-butoxyethanol 3

(Contd. on page 8)
Traffic hazard class: "agricultural application" (Agriculture criteria)

Markings according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

Code letter and hazard designation of product:

<table>
<thead>
<tr>
<th>Hazard Determining Components of Labelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl methacrylate</td>
</tr>
</tbody>
</table>

Risk phrases:
11 Highly flammable.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.

Safety phrases:
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes
24 Avoid contact with skin.
28 After contact with skin, wash immediately with plenty of soap and water
33 Take precautionary measures against static discharges.
37 Wear suitable gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
60 This material and its container must be disposed of as hazardous waste.

National regulations

Technical instructions (air):

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>&lt; 2.5</td>
</tr>
<tr>
<td>NK</td>
<td>50-100</td>
</tr>
</tbody>
</table>

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Section 355 (Extremely hazardous substances):
None of the ingredients is listed.
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
R11 Highly flammable.
R22 Harmful if swallowed.
R25 Toxic if swallowed.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitization by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Department issuing MSDS:
IGG-AD Ingenieurbüro für Gefahrstoff- und Gefahrgüterberatung
Bismarckstraße 10
D-68623 Lampertheim
Fax: 0049-(0)6206-58422 http://www.igg-ad.de info@igg-ad.de

Contact:
Dr. U. Prinz (u.prinz@igg-ad.de)
Dipl.-Chem. H. Hinse (heidrun.hinse@igg-ad.de)

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
MAL-Code: Måleteknisk Arbeidshygjennsk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

* Data compared to the previous version altered.