

# Epoxy.com Product #697 MMA

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## Epoxy.com Product #697

### Methyl Methacrylate (MMA) Binder Resin

**Ideal for where a Fast Setting Self Leveling MMA Mortar is Required**

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#### Description

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** is a 100% reactive methyl methacrylate binder resin and top coat for self leveling, broadcasting, and troweled mortar systems. **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** is ideal for decorative troweled and broadcast quartz floors and industrial surfacing subject to heavy loads and traffic. **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** is excellent for food processing areas, restaurant kitchens, laboratories, machine shops, chemical storage warehouses, animal research facilities, and numerous other applications.

#### Advantages

- 100% solids - zero (0) VOC - Meets strict low VOC Requirements
- Excellent leveling and flow properties
- Can be used even at low temperatures

- Chemically resistant
- UV resistant, UV will not cause it to yellow or chalk
- Fast setting, can typically be recoated in about 1 hour

## Considerations

- Concrete must be clean and free of all oil, grease, paint, dirt, sealers, laitance and any other foreign material that might interfere with proper bonding.
- Do not store **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** in direct sunlight, storage temperature must be less than 80 ° F.
- On or below grade applications should have a moisture vapor barrier under the slab. Maximum vapor transmission must be less than 3 lbs per ASTM F-1869 and less than 80% RH per ASTM F-2170.

## Composition

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** is a 100% Solids Methyl Methacrylate (MMA).

## Surface Preparation

Good surface preparation is the first necessary step to successful installation of all Resinous Flooring System. All substrates must be clean and free of all oil, grease, paint, dirt sealers laitance and any other foreign matter that may interfere with proper bonding. Follow the directions for surface preparation as outlined in [Epoxy.com Surface Preparation Guide](#).

## Color Selection

Can be used clear with Epoxy.com Colored Quartz or Epoxy.com Flooring Flakes. Color packs are available in selected colors. Color pack mix ratio is 1 QT color pack per 5 gallon pail of **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin**.



## Mixing and Installation

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** requires the adding of [Epoxy.com Product #695 Hardening Powder](#). to start the hardening process. The amount of hardener must be adjusted to the respective surface temperature (see table below). At temperatures below 40°F, Epoxy.com Product #696 Accelerator must be used in addition to the amount of hardener used at the 40°F level (about ½ oz by vol./gal. @ 32°F up to 2.0 oz by vol./gal. @ -20°F).

| Temp. (°F) of Resin, Air & Floor Surface | Hardener % by Wt. Based on Wt. of #697 Resin | Hardener by Vol. (oz.) Based on Gallon of #697 Resin | Pot Life (min.) | Hardness Time (min.) |
|--|--|--|-----------------|----------------------|
| +40                                      | 5.0  | 9.0  | Approx. 30.0    | Approx. 60           |
| +50                                      | 4.0  | 7.5  | Approx. 25.0    | Approx. 55           |
| +60                                      | 3.0  | 5.5  | Approx. 20.0    | Approx. 50           |
| +70                                      | 2.0  | 3.5  | Approx. 15.0    | Approx. 40           |

## Physical Properties

Basic Material                      Methyl Methacrylate Resin (MMA)

|                                    |                |
|------------------------------------|----------------|
| Appearance                         | Viscous Liquid |
| Viscosity, cps@ 73°F               | 280-290        |
| Weight per Gallon                  | 8.1 lbs        |
| VOC g/l                            | Zero (0)       |
| Pot Life Min<br>(Varies with Temp) | 15-30          |
| Cure Rate (min)                    | 40-60          |
| Recoat Time, min.                  | 60             |

## Maintenance

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** is considered to be a very low maintenance flooring system. With some textures and conditions it may have to be cleaned by bristle brush or low pressure wash. Due to the thermoplastic character of Methyl Methacrylate (MMA) resins, you may get black marks from fork lifts and tire skidding.

## Storage

Store **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** in a cool and dry place, below 80°F, out of direct sunlight. Do not store near open flame or food. Shelf life is 4-6 months in the original unopened containers.

## Hints

Adequate cross ventilation should be provided. Good ventilation during the processing ensures a good cross linking and hardening. Read, understand and follow Material Safety Data Sheets and Application Instructions prior to use. Use only as directed. If substrate and/or material temperature is above 90°F, DO NOT apply material.

## #697 Methyl Methacrylate (MMA) Binder Resin - Self Leveling

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** is a slurry topping formulation which provides excellent wear-ability and chemical resistance. It has proven successful in food processing, low traffic warehouses, chemical storage, restaurant kitchens, laboratories, pharmaceuticals, locker rooms, clean rooms, lobbies and animal research.

The Self Leveling System base on **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin**, hardens rapidly after the addition of [Epoxy.com Product #695 Hardener](#). **Epoxy.com Product #697 Methyl Methacrylate (MMA) - Self-Leveling** can be smooth or non-skid and provides excellent resistance against acidic and caustic materials. The **Epoxy.com Product #697 Methyl Methacrylate (MMA) - Self-Leveling** is UV resistant and provides for a non-yellowing, non-chalking surface.

### Formulation Guide for Epoxy.com Product #697 Methyl Methacrylate Binder - Self Leveling Method

**Epoxy.com Product #697 Methyl Methacrylate (MMA) - Self-Leveling** is formulated with fillers as indicated below. The amount of hardener will vary with temperature. At temperatures below 40°F Epoxy.com Product # 696 Accelerator must be used in addition to the hardener (about ½ vol. oz/gal. @ 32°F up to 2 vol. oz/gal. @ -20°F) while maintaining the amount of Epoxy.com Product #695 hardener powder as at the 40°F level.

#### Typical Batch Size for Epoxy.com Product #697 MMA (MMA) - Self-Leveling

| Material                 | % Parts by Wt  | Wt.            | Volume                 |
|--------------------------|----------------|----------------|------------------------|
| #697 Resin               | 26.7           | 8.2 lbs        | 1.0 gal.               |
| #78 Self Leveling Filler | 72.            | 22.0 lbs       | 1.8 gal (230 vol. oz.) |
| Pigment Pack             | n/a            | n/a            | 6.4 vol. oz.           |
| #695 Hardener            | Varies by temp | Varies by temp | Varies by temp         |

**Batch above will yield 2.0 gallons with coverage as follows**

|                 |       |               |
|-----------------|-------|---------------|
| <b>Coverage</b> | 1/16" | 50-52 sq. ft. |
|                 | 1/8   | 24-26 sq. ft. |
|                 | 3/16  | 18 sq. ft.    |

**Yield of ± 3.0 gal of MMA Mortar**

|      |          |
|------|----------|
| 1/8" | 35 Sq ft |
| 3/16 | 25 sq ft |

**Application of Epoxy.com Product #697 Methyl Methacrylate (MMA) Self-Leveling Method**

Add hardener to the clear resin and add dry components and mix thoroughly with a low speed mixer. Add liquid pigment and mix 1-2 minutes until no lumps are present. Apply to areas previously primed with [Epoxy.com Product #691 Methyl Methacrylate \(MMA\) Primer](#) using a gauge rake or trowel. After raking and spike rolling, apply broadcast. The fresh basecoat may be broadcast to excess with a wearing course. Rates will vary from 0.25-1.25 lbs./sq. ft. depending on type and size of aggregate. It is recommended to broadcast 16-30 mesh aggregate. Do not use broadcast aggregate smaller than 30 mesh. Aggregate may be natural or colored quartz, sand, aluminum oxide, emery, etc.

For other decorative floors, decorative vinyl chips and/or glass aggregate may be broadcast into the coating.

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** must be top coated or sealed with Epoxy.com Product #689, [Product #693 \(exterior\)](#), or Product #699 . These can be pigmented or clear. Top coating is necessary for improved scratch resistance, stain resistance and chemical resistance.

**#697 Methyl Methacrylate (MMA) Binder Resin - Trowel Method**

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** can be a decorative topping formula or industrial mortar using blended mortar aggregate. Used in food and beverage processing, restaurant kitchens, laboratories, animal rooms, pharmaceuticals, locker rooms, grocery stores and/or areas requiring a decorative heavy duty surface or heavy duty mortar.

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** systems are formulated with graded aggregates containing no silica flour and must be troweled. The use of colored granules and aggregates provides the decorative effects. The UV resistant resin gives a non-yellowing, non-chalking surface.

**Formulation Guide for Epoxy.com Product #697 Methyl Methacrylate Binder - Trowel Installation**

Typical batching of **Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** for trowel application is listed below. The amount of hardener will vary based on the substrate temperatures under 40°F. At lower temperatures the material will be stiff and difficult to trowel.

**Typical Batch Formula for Troweled Quartz**

| <b>Material</b> | <b>% Parts by Wt.</b> | <b>Wt in lbs</b> | <b>Volume</b>  |
|-----------------|-----------------------|------------------|----------------|
| #697 Resin      | 24                    | 8.2              | 1 gal.         |
| Blended Quartz  | 76.0                  | 26.0             | 2 gal          |
| #60 Cove Powder |                       | 2.0              | 1 pint         |
| #696 Hardener   | Varies by Temp        | Varies by Temp   | Varies by Temp |

**When Batch as Above Yield**

|           |                  |
|-----------|------------------|
| Yield     | ±2 gal. Mortar   |
| Coverage: | 1/8" 24-25 sq ft |
|           | 3/16 18 sq ft    |
|           | 1/4 12-13 sq ft  |

### Typical Batch Formula for Blended Mortar Aggregate

| Material                   | % Parts by Wt.                               | Wt in lbs | Volume       |
|----------------------------|--|-----------|--------------|
| #697 Resin                 | 14   | 8.2       | 1 gal.       |
| #82 Mortar Blend Aggregate | 85   | 50        | 3.25 gal     |
| #694 Pigment Pack          | n/a  | n/a       | 6.4 Vol. oz. |
| #696 Hardener              | Varies by Temp Varies by Temp Varies by Temp |           |              |

### When Batch as Above Yield

|           |                |
|-----------|----------------|
| Yield     | ±3 gal. Mortar |
| Coverage: | 1/8" 35 sq ft  |
|           | 3/16 25 sq ft  |
|           | 1/4 17.5 sq ft |

## Application

Add the hardener to the clear resin followed by the dry aggregates and mix thoroughly for 1-2 minutes until no lumps are present. Apply mixture to the primed substrate using a rake and then smooth with a trowel. After troweling, surface may be broadcast, if necessary. After curing, remove any excess broadcast and apply the proper sealer.

**Epoxy.com Product #697 Methyl Methacrylate (MMA) Binder Resin** must be top coated or sealed with Epoxy.com Product #689, [Product #693](#) (exterior), or Product #699 . These can be pigmented or clear. Top coating is necessary for improved scratch resistance, stain resistance and chemical resistance.

## Availability

Contact Epoxy.com Customer Service Department

## Storage

Store in a cool and dry place, below 80°F, out of direct sunlight. Do not store near open flame or food. Shelf life is 4-6 months in the original unopened containers

## Technical Support

Call Epoxy.com Technical Support Department with any technical support questions.

Proper mixing and installation is critical to the optimal success of all product. See [Installation Tips](#), [Techdata](#), & [MSDS](#) for more details on our products. Be sure to contact us with any questions and/or concerns that you have.

For more information please contact:

# Epoxy.com

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