MAS

TIME SAVING EPOXY RESINS

DEEP POUR

High Performance Clear Casting Epoxy Resin System

@masepoxies
#deeppourepoxy

- Crystal Clear
- 100% Solid
- Extremely Durable
- Impact Resistant
- Self-Leveling
- Low Viscosity
- Extended Cure time
- Superior Air Release qualities
- High-Gloss Waterproof Finish
- Easy to use

Working Conditions:
For best results, all materials and working conditions should be maintained at a constant 60°F-75°F. Epoxy is a temperature sensitive material. When cool, it's thicker and sets slower. When warm, it's thinner and sets faster. Working in a shop or with material above 75°F, Deep Pour may set too quickly and exotherm (become too hot) which could cause it to yellow, distort, shrink or crack.

Exothermic Reactions:
CAUTION EXOTHERMIC REACTION: Mixed epoxy generates heat. The more you mix, the hotter it will be. Must use after mixing. Only mix what you are ready to pour. May fume and smoke. Please visit the online FAQ before starting your project.

Coverage:
Volumetric yield of Deep Pour is about 25 cubic inches per mixed pound. Coverage and yield can depend on any number of factors, most notably casting thickness, porosity of the surface and waste. A 1.3 gallon kit (1 gallon of resin and a 0.3 gallons of hardener) should yield about 300 cubic inches.

Surface Preparation:
All surfaces must be clean, dry and free of contamination. Contaminates include, but are not limited to dust, oil, moisture, sap, lint, and sanding debris. Do not use paper towels, dirty rags, contaminated sandpaper, or touch surface with oily fingers. Sand as needed and clean off sanding debris. Wipe surface down with a clean cotton t-shirt rag soaked in an oil free solvent like denatured alcohol prior to applying epoxy seal coat. Do not use tack cloth.

Seal Coat:
Always apply a seal coat before coating or casting against wood. To start, the surface must be clean, dry and free of contamination. Next, apply a thin coat of mixed epoxy to surface. Take care to cover and seal any voids or cracks present. Allow the seal coat to cure to a rock hard solid, and sand with 80-120 grit paper, paying special attention to imperfections such as air bubbles. Lastly, wipe clean with a cotton t-shirt rag and denatured alcohol. The purpose of a seal coat is to minimize the effects of off gassing by creating a thin air-tight barrier between a porous wooden surface and Deep Pour epoxy so air bubbles won't percolate up through the curing epoxy creating cosmetic defects. We recommend sealing with the MAS 2:1 Non-blushing system, MAS PES, or MAS Table Top but you can also seal with MAS Deep Pour. Deep Pour is an extremely slow curing system by design. If used as a seal coat, you may need to wait 24-48 hrs for seal coat to cure to the point where it can be sanded and cleaned before continuing.

Mix Ratio:
The mix ratio for the MAS Deep Pour is 3 parts resin to 1 part hardener (3A:1B) by volume, or 100 parts resin to 28 parts hardener (100A:28B) by weight. Using the recommended mix ratio is VERY important when using epoxy. DO NOT deviate in an attempt to speed up or slow down the gel time. An excess of resin or hardener will negatively affect the cure and could cause a wide range of short and/or long term problems with your epoxy project.

Mixing technique:
Best practice is to combine resin and hardener at recommended mix ratio, mix 1-2 minutes while scraping sides and bottom of container until no streaks or striations, transfer to second container, mix 1-2 minutes again until fully blended, let sit for 1-2 minutes to allow air bubbles a chance to start rising to surface, and then use immediately. Take extra care not to whip in excess air. The whole mixing process shouldn't take more than 5-10 minutes. If the mixed material starts to get warm, that's your last warning the curing reaction is starting to take place and you need to get the epoxy poured onto your surface ASAP.

Max Mixing Quantity:
Do not mix more than one gallon at a time. For larger projects, step pour multiple pours. Only mix up what you intend to immediately use. Exceeding max mixing quantity may cause Deep Pour to heat up and exotherm upon curing which could cause it to yellow, distort or crack.

Max Casting Thickness:
Max casting thickness can vary depending on a number of factors including shop temp, material temp, mixing quantity, mold material, project dimensions, etc. Larger slabs should be poured thinner than smaller castings to minimize exotherm. Every project is unique, but as a general guideline do not exceed 0.5" casting thickness for a full mixed 1.3 gallon kit, or 1" for a half mixed kit. Step pour multiple layers for thicker castings.

Step Pouring:
The maximum casting depth of MAS Deep Pour is roughly 0.5"-1" per pour, but deeper castings can be achieved by step pouring multiple layers. Each layer MUST be allowed to cool to room temperature (70-80°F) before adding additional layers. Once cooled, you can pour the next layer without additional surface prep all the way up until you can no longer indent a fingernail into the previous coat. No sanding necessary. Warmer temperatures will set faster, and cooler temperatures will set slower. Large batches of mixed epoxy will also cure much more quickly than small batches. If allowed to cure past the point of being able to indent a fingernail, then you will want to lightly scuff sand between coats to promote adhesion. As a general rule, if you can sand, you should.

Working time:
Epoxy is a mass and temperature sensitive material. The gel time (time it takes the mixed epoxy resin and hardener to initially harden up) can vary drastically depending on any number of factors such as mixing mass, material temp, ambient temp, mixing time, speed of mixing, speed of application, casting and coating thickness, etc. MAS Deep Pour has a 5.5 hour gel time at 77°F in a 150 gram mass, but will set up much faster if warmer or left sitting for an extended time in a larger mass. The more you mix up, and the warmer it is, the faster it will gel. That being said, 10-15 minutes is all it should take to carefully mix and pour. If the mixed epoxy starts to heat up in your mixing bucket, apply immediately.

Cure Time:
MAS Deep Pour in a 0.5"-1" thick casting at 77°F should be tack free in roughly 4-8 hrs, sandable after 12-24 hrs, and fully cured in 5-7 days. Keep in mind that epoxy is mass and temperature sensitive. Thin castings and cooler working conditions will cure slower, and thick castings and hotter working conditions will cure faster.

Tips and Techniques for Casting and Encapsulating:
Create a mold out of melamine or MDF board available at local hardware stores. Make sure all seams are sealed prior to pouring. Tape inside corners and seams of mold with Tyvek Tape available at local hardware stores. Coat the inside of the mold with automotive paste wax, release agent spray or Tyvek tape so epoxy does not bond to mold. Mold must be clean, dry and dust free before pouring desired amount of epoxy. For best results, pour epoxy in controlled workspace at temperatures from 65°-80°F. Once epoxy is poured into mold, allow 24 hours for epoxy to gel and set in mold. Areas with low volume of epoxy will take up to 36 hours to fully cure. Increasing heat 24 hours after pouring can speed up cure time. If applying more than one coat, let epoxy fully cure, lightly sand and clean surface and repeat the process if necessary.