

CRYSTAL CLEAR EPOXY DEEP CASTING EPOXY

DESCRIPTION: Proline's **Crystal Clear Epoxy** is a high performance clear casting epoxy resin system designed for filling in large voids between raw wood slabs and other objects. Popular for creating resin rivers between wood and locking other objects into a clear epoxy resin. Crystal Clear Epoxy can also be tinted with metallic pigment.

TYPICAL USES: Decorative tables, furniture, bar tops.

FEATURES & BENEFITS:

- Crystal Clear
- Low Odor
- Superior Air Release
- Low Viscosity
- Self Leveling
- Extremely Durable
- Impact Resistant
- High Gloss Waterproof Finish
- Extended Cure Time
- Easy to Use
- 100% Solids

AMBIENT CONDITIONS: Epoxies are temperature sensitive materials. When cool, epoxies are thicker and set slower. When warm, epoxies are thinner and set faster. For best results, all materials and ambient working environment should be maintained at a constant 60°F-75°F. Working in an area above 75°F or if the material is warmer than 75°F, **Crystal Clear Epoxy** may set too quickly and become too hot, which could cause it to yellow, distort, shrink or crack.

COVERAGE: Volumetric yield of **Crystal Clear Epoxy** 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. 1 gallon of mixed epoxy should yield about 230 cubic inches.

SURFACE PREPARATION: All surfaces must be clean, dry and free of contamination. Contaminants 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 surfaces with oily fingers. Sand as needed and clean off sanding debris. Wipe surfaces down with a clean cotton t-shirt rag soaked in an oil free solvent like denatured alcohol or acetone prior to applying epoxy seal coat. Do not use tack cloth.

SEAL COAT: Always apply a seal coat before coating or casting against wood. We recommend sealing porous surfaces with Proline's Epoxy 100 or Clear Top Epoxy. To start, the surface must be clean, dry and free of contamination. Next, apply a thin coat of mixed epoxy to the surface. Coat 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 or acetone. 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 Crystal Clear Epoxy so air bubbles won't percolate up through the curing epoxy creating cosmetic defects.

MIXING RATIO: The mixing ratio for **Crystal Clear Epoxy** is 3 parts Resin to 1 part Hardener (3A:1B) by volume. 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.

MAXIMUM MIXING QUANTITY: CAUTION - Exothermic Reaction: Mixed epoxy generates heat. The more you mix, the hotter it will get. Do not mix more than one gallon at a time. For larger projects, step pour multiple layers. Only mix up what you intend to immediately use. Exceeding max mixing quantity may cause **Crystal Clear Epoxy** to heat up and exotherm upon curing which could cause it to yellow, distort or crack.

MIXING INSTRUCTIONS: Best practice is to combine resin and hardener at recommended mixing ratio, mix 1-2 minutes while scraping sides and bottom of container until well blended. Transfer the material to a second container, and mix thoroughly again for 1-2 minutes. Let the epoxy 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.



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MAXIMUM CASTING THICKNESS: Maximum casting thickness can vary depending on a number of factors including ambient temperature, 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 **Crystal Clear Epoxy** 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. **Crystal Clear Epoxy** 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: **Crystal Clear Epoxy** 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.

HOW SUPPLIED: **Crystal Clear Epoxy** is packaged in 1 and 4 gallon kits for convenient use in a 3A:1B mixing ratio. 4 - 55 gal drum kits are also available.

STORAGE: 50°F (10°C) or above

IMPORTANT: Store all two-component products between 70° - 75° F (21° - 24° C) at least 24 hours prior to mixing. Colder materials will be thicker and harder to work with. Warmer materials will have a shorter pot life and shorter application window. Material that has been sitting in the sun or in a hot environment for too long can set up and harden quickly once mixed together.

CAUTION: KEEP OUT OF REACH OF CHILDREN. Before using or handling, read the Safety Data Sheet and Warranty. DO NOT TAKE INTERNALLY. Avoid contact with skin and eyes. Use only with adequate ventilation and use a respirator when exposure levels are above applicable limits.

WARRANTY: This product is not for public use and is intended for use by licensed contractors, experienced and trained in the use of these products. It is warranted to be of uniform quality within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or implied, is or can be made either as to the affects or as results of such use. In any case, the manufacturer's obligations shall be limited to refunding the purchase price or replacing material proven defective. The end user shall be responsible for determining product's suitability and assumes all risks and liability.