

DIAMOND EPOXY RESIN & HARDENER GENERAL DESCRIPTION

The Diamond Epoxy Resin System is a 100% solids, two-component, one to one by volume room temperature curing epoxy resin system for coating countertops and table tops. It cures to a clear, mirror-like finish that is resistant to scratching and yellowing and has excellent antiblushing properties and does not distort with age.

APPLICATION INSTRUCTIONS

Ideal Temperature: 70-80°F
Mix Volume: 1:1 by volume
Mix Time: 5-9 minutes

Always use clean dry tools for mixing and applying. Flood coats will flow and self level, but tools such as brushes, plastic spreaders and squeegees may be used to help spread the mixed epoxy resin. A few minutes after the coat is applied bubbles will rise to the surface. A propane torch held six inches above the surface of the epoxy resin may be used to break bubbles by slowly sweeping the torch back and forth over the surface until bubbles disappear. A thin seal coat should first be applied to the table top or bar top and any objects that will be imbedded. Delicate objects that may be damaged by epoxy resin such as photographs may need to be sealed with an alternate clear coat (i.e. polyurethane or

acrylic sealers) to protect them prior to imbedding. Once the seal coat has set, additional flood coats up to 1/8" thick may be applied.

Diamond Epoxy can usually be recoated in 4-8 hours without any additional prep work or sanding. If the previous layer is allowed to fully dry, the surface should be scuff sanded with 220-320 grit sand paper for a mechanical bond between coats. After sanding the surface should be wiped with a solvent such as acetone or denatured alcohol to remove dust and other contaminants. Allow the surface to dry before applying the next coat. Although resistant to yellowing, this product is not recommended for continuous outdoor exposure to UV light and finishes may slowly lose their gloss or discolor over time if left outdoors.

HANDLING PROPERTIES

Resin Density at 25°C, lbs/gal

Method: ASTM D1475
Result: 9.7

Hardener Density at 25°C, lbs/gal

Method: ASTM D1475
Result: 8.1

Resin Viscosity at 25°C, cP

Method: ASTM D2196
Result: 9,000

Mix Ratio by Weight

100A : 83B

Mix Ratio by Volume

1A : 1B

Mixed Viscosity at 25°C, cP

Method: ASTM D2196
Result: 3,500

Gel Time at 25°C, 150g mass, min.

Method: ASTM D2471
Result: 30

SAFETY HANDLING

View the Safety Data Sheets for the complete handling instructions for Diamond Epoxy. Use the product in a well ventilated area using gloves, eye protection, and clothing protection. Avoid contact with skin and eyes as well as clothing contamination. Wash hands thoroughly after handling. Make sure to work in well ventilated areas using gloves, eye protection and clothing protection. Avoid contact to the skin and eyes. Avoid clothing contamination. Wash thoroughly after handling. These products may cause skin and respiratory allergic reactions.

STORAGE

Store at 60-90°F in a dry place. After use, tightly reseal all containers. Store products on a raised surface off the floor during cold weather and avoid storing near outside walls or doors. Epoxy resins that are contaminated with dust or moisture, or are subjected to low temperatures may crystallize. Do not use material that has any sign of crystallization until it has been liquefied. A crystallized resin or hardener can be returned to its original state by heating the material to 140°F to 150°F and stirring until it returns to the liquid state.

PRODUCT CHARACTERISTICS

Color Method: Visual Result: Clear	Compressive Strength, psi Method: ASTM D695 Result: 10,400	Cured Density, g/cm³ (lbs/in³) Method: ASTM D792 Result: 1.11 (0.040)
Tensile Strength, psi Method: ASTM D638 Result: 7,400	HDT, Room Temp. Cure °F Method: ASTM D648 Result: 118	Volumetric Yield, in³/lb Method: ASTM D792 Result: 25.0
Tensile Modulus, psi Method: ASTM D638 Result: 382,000	HDT, Post Cure, °F Method: ASTM D648 Result: 124	Volumetric Shrinkage, % Method: ASTM D792/D1475 Result: 3.85
Tensile Elongation, % Method: ASTM D638 Result: 5.9	Flexural Modulus, psi Method: ASTM D790 Result: 373,000	Hardness, Shore D Method: ASTM D2240 Result: 82
Izod Impact, Notched, ft-lb/in Method: ASTM D256 Result: 0.76	Flexural Strength, psi Method: ASTM D790 Result: 12,800	

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