DIAMONDCOAT™

TECHNICAL DATA SHEET
DIAMOND EPOXY
Updated 4/2/2018

DIAMOND FLOORING EPOXY RESIN & HARDENER GENERAL DESCRIPTION

The Diamond Epoxy Resin System is a 100% solids, two-component, two to one by volume room temperature curing epoxy resin system for coating floors. It has a medium pot life, cures to a clear, mirror- like finish that is resistant to scratching and yellowing and has a low viscosity ideal for floor installations.

APPLICATION INSTRUCTIONS

Ideal Temperature: 70-80°F
Mix Volume: 2:1 by volume
Mix Time: 3-5 minutes

Always use clean dry tools for mixing and applying. Mix according to the 2:1 ratio. Never mix the epoxy below 65°F. Flood coats will flow and self level, but tools such as notched 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. 91% Isopropyl Alcohol may be used to break bubbles when sprayed liberally over the surface until bubbles disappear. A thin seal coat of the epoxy should first be applied to the floor for best results. After 6 hours, the seal coat will set, and additional flood coats up to 1/8" thick may be applied.

Diamond Flooring Epoxy can usually be recoated in 12 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. To post cure Diamond Flooring Epoxy, heat the surface to 150°F for four hours after pouring. 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: 9.3

Hardener Density at 25°C, lbs/gal
Method: ASTM D1475
Result: 8.5

Resin Viscosity at 25°C, cP
Method: ASTM D2196
Result: 700

Hardener Viscosity at 25°C, cP
Method: ASTM D2196
Result: 150

Mix Ratio by Weight
100A : 45B

Mix Ratio by Volume
2A : 1B

Mixed Viscosity at 25°C, cP
Method: ASTM D2196
Result: 370

Gel Time at 25°C, 150g mass, min.
Method: ASTM D2471
Result: 42

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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 60-100°F in a dry place. After use, tightly reseal all containers. Diamond Flooring Epoxy if subjected to dust, moisture, or low temperatures could crystallize. To restore the epoxy to its original state, vent the container and heat to 125-145°F. Then mix according to the 2:1 ratio specified and use immediately.

PRODUCT CHARACTERISTICS

Color
Method: Visual
Result: Clear

Tensile Strength, psi
Method: ASTM D638
Result: 6,300

Tensile Elongation, %
Method: ASTM D638
Result: 6.5

Izod Impact, Notched, ft-lb/in
Method: ASTM D256
Result: 1.23

Compressive Strength, psi
Method: ASTM D695
Result: 7,600

HDT, Room Temp. Cure °F
Method: ASTM D648
Result: 119

HDT, Post Cure, °F
Method: ASTM D648
Result: 127

Flexural Modulus, psi
Method: ASTM D790
Result: 315,000

Flexural Strength, psi
Method: ASTM D790
Result: 9,900

Cured Density, g/cm^3 (lbs/in^3)
Method: ASTM D792
Result: 1.11 (0.040)

Volumetric Yield, in^3/lb
Method: ASTM D792
Result: 24.8

Volumetric Shrinkage, %
Method: ASTM D792/D1475
Result: 3.2

Hardness, Shore D
Method: ASTM D2240
Result: 81

USERS RESPONSIBILITY/DISCLAIMER OF LIABILITY:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.