

DESIGNER EPOXY RESIN DEEP CASTING

100% Solids, UV Resistant, Crystal-Clear Casting Epoxy

Description

The Designer Epoxy Resin is a two-component (2A:1B) epoxy system designed for casting applications providing a crystal-clear, UV resistant premium finish. The product is VOC-free, 100% solids and is virtually odor free. This product can be poured at very thick levels (1 ¾ inch or more) while keeping a crystal-clear look. Thickness above 1 ¾ inch can be achieved depending on the total volume and the shape of the pour. It displays excellent air release and color retention capabilities. It also possesses superior mechanical properties.

Uses

The Designer Epoxy Resin provides excellent results for the most demanding applications:

- + River tables
- + Wood crafting
- + Crystal clear encapsulation
- + Bonds to wood, metals, concrete, plastics, fiberglass, paint, granite, laminate (see Laminate/Formica Application section), etc.

Advantages

- + Excellent UV resistance
- + Crystal clear
- + Can be poured at very thick levels
- + Ultra-low viscosity, very nice glossy finish
- + Environment and health friendly (100% solids, VOC-free and no solvent)
- + Food safe
- + Virtually odor free
- + Easy application with ultra-long pot life and working time
- + Ideal for casting, can also be used for small encapsulation applications
- + Good elongation and excellent abrasion resistance
- + High resistance to amine blush and contamination (fish eyes)
- + Excellent for letting out bubbles, even with thick layers
- + Impermeability / low moisture sensitivity

- + High density of the product prevents dirt penetration resulting in low maintenance post application

Application Data

Mix Ratio	2A:1B	
Packaging	1.5 US gallon kits (1 Gal + 0.5 Gal) 3 US gallon kits (3 x 3,78L)	
Color	Clear, Metallic Colors	
Shelf Life	One year, in original unopened factory pails under normal storage conditions	
Applic. temp.	20°C / 68 °F	
Cure Time		
Working Time	5 hours	20°C / 68°F and 30% Rel. Hum.
1 ¾ inch (Tack Free)	42 hours	20°C / 68°F and 30% Rel. Hum.
15 mils (Tack Free)	42 hours	20°C / 68°F and 30% Rel. Hum.

Technical Properties

Hardness	ASTM D2240	88/90	hore D
DE 500 hr	ASTM 3424	2.4	
Solids Content	100%		
Viscosity	Clear	250 +/-50	cps
VOC Content		0	g/l

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Mixing

Mix two parts of A and one part of B together at low speed in a separate container. The mixing container must be clean and free of any outside particle.

Mix thoroughly for 4-5 minutes, until a completely homogeneous mixture is obtained. Minimize the entrapment of air. Make sure to scrape sides and bottom of the mixing container so no unmixed material remains. Mixing should also be completed until there is no more cloudiness when looking closely at the mix.

Only mix the quantity of product required depending on the pot life and the working time required. When you mix by hand, never mix more than 0,5 gallon at a time, ideally mix one quart at a time. Mixing quantities can be larger for experienced users. When pouring the material, never scrape the sides of the mixing container where may be unmixed material. Unmixed material will create a soft spot on your work piece.

Curing Time

The curing time of this product will depend on thickness and the shape of the volume poured. Curing times can differ significantly depending on the quantity poured at once, the shape sought and ambient temperature. When poured in volumes and shapes that are too large, epoxy creates exothermic reactions. It is imperative that amount of epoxy sought for each application does not exceed a certain point where the exothermic reaction gets out of control. If the exothermic reaction gets out of control, epoxy temperature can reach a level above its boiling point. An exothermic reaction can create unwanted events such as an uneven surface, an amber color or even smoke. It is recommended to apply the product when room temperature is stable (close to 20°C / 68°F). Experienced users can also cool down the product with fans. On the other hand, when applied at very low temperature, the product might not cure properly.

Application

Air and substrate temperature should be close to 20°C / 68°F during the pour and throughout the curing process. Make sure the working area is dust free. Make sure to prepare a screen to protect the surface once your work is completed since dust, particle and other objects could fall in the epoxy prior to complete cure. It is recommended to use a torch or a heat gun to burst bubbles that are forming at the surface of the film. This process will also flatten the surface.

Square Footage

To calculate the square footage that will cover 1 US Gallon (3.78L) of material depending on the thickness, divide the number 1604 by the thickness sought in mils. One mil equals 1/1000 of an inch. For instance, if the thickness sought is 2 inches, the calculation is 1604 divided by 2000 mils (1000 x 2) which equals to 0.8 square feet per gallon.

Clean Up

Denatured alcohol is best suited for cleaning. Excess material (A and B) should be mixed together and allowed to cure. Cured product may be disposed of without restriction. Uncured material should be stored in a suitable and sealed container and may be disposed in accordance with provincial / state/ federal regulations.