C-CAST

CRYSTAL CLEAR EPOXY CASTING

DESCRIPTION

C-CAST is a transparent, two-part epoxy casting system designed to offer maximum compatibility with a wide range of substrates. It is formulated with minimal shrinkage and thorough wetting power to fill cracks and voids exceptionally for casting into the wooden objects. Highly polishable when cured, C-CAST is developed to offer unrivaled clarity with its UV resistant and self-degassing properties. C-CAST is designed specifically for medium- to large-sized casting, with up to 3 inch per pour for wooden substrates and up to 3.5 inches for other materials such as silicon or plastic molds. C-CAST can be used for just about any application that requires a clear, tough, non-yellowing and bubble-free epoxy casting. C-CAST is a casting system not a coating system. Although the cured open surfaces appear perfectly flat and glossy, sometimes they require being polished.

PHYSICAL PROPERTIES

	PART A (RESIN)	PART B (HARDENER)
Composition	Epoxy Resin	Mix of Amines
Appearance	Clear Liquid	Clear Liquid
Viscosity (25°C -cps)	800–1000	150–250
Mixed Viscosity (25°C -cps)	450–550	

CURING BEHAVIOUR (AT 25°C)

Working Time	90 Minutes
Gel Time	160–240 Minutes
Cure Time	48 Hours
Full Cure Time	5–7 Days

CURING MECHANICAL PROPERTIES

Hardness (Shore D)	75–80
Max Tg	70–75°C
Tensile Strength	8500–9000 psi
Elongation at break	6–8%

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HOW TO USE

C-CAST is a two-part epoxy resin system which does not need degassing or any special equipment. Sealing, mixing and filling are three basic steps of any casting. Before you begin, understand the following:

1. HUMIDITY
   Humid environments, especially lower ambient temperatures, can affect surface finish. For best results, avoid pouring when relative humidity is 65% or more.
2. SURFACE PREPARATION
   Ensure that the surface is as dry as possible. Avoid using wood with high moisture content. For all porous surfaces, it is highly recommended to first seal the surface with a thin layer of C-CAST. Sealing coat must be allowed to cure before the main pouring.
3. TRAPPED AIR BUBBLES
   Although C-CAST has some advanced additives to reduce trapped air bubbles, factors such as ambient temperature, mixing action or even pouring thickness can sometimes affect the development of bubbles within the resin. After 25–35 minutes, if you still see bubbles then lightly use a heat gun or blow torch to dispel any bubbles.

MEASURING

It is important to mix the resin and hardener exactly at the correct resin to hardener ratio.

Mixing Ratio by Weight (g)	100:43
Mixing Ratio by Volume (mL)	2:1

DIRECTIONS FOR USE

Part A and B need to be mixed thoroughly in the correct volume ratio of resin to hardener (2:1) for 3 minutes before use. Pot life of the mixed product is 60 minutes and the demold time of the mixed product is 48–72 hours. For max hardness, full cure time is 5–7 days at room temperature. For best results, it is recommended to ensure wood is properly seasoned and dried before use.

TEMPERATURE AND HUMIDITY

For best results an ambient temperature of between 21°C and 26°C is recommended. For best results, humidity should be 50–55%.

STORAGE

Product must be kept in a cool and dry room at 10°C to 25°C.

SHELF LIFE

Minimum two (2) years in unopened packaging at +5°C / +27°C.

SAFETY AND HANDLING

Work in a well-ventilated area and always wear gloves and eye protection, whenever weighing, mixing and pouring.

Consult Material Safety Data Sheet (MSDS) before use.

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