

Strongcoat CL Casting

Solvent free, clear epoxy casting resin



Description

Strongcoat CL Casting is a solvent free, clear epoxy casting resin developed to offer self-air release. It is compatible with a wide range of substrates and mold materials, especially casting into wood, where it provides a thick, clear resin infills in furniture like river tables.

Strongcoat CL Casting is supplied as a two component product in pre-weighed base and hardener packs, ready for mixing and can be applied up to 50 mm thickness.

Applications

Strongcoat CL Casting is designed for casting applications such as:

- ▲ Furniture: ideal for river tables, knot holes, crack filling
- ▲ Decorative arts: pouring objects of all shapes.
- ▲ Wood and resin projects: lamps, blocks of wood and resin.
- ▲ Resin jewelry
- ▲ Encapsulations of decorative elements: dried flowers, stones, models.
- ▲ Clear castings: sculptures, figurines.
- ▲ 3D pigmented images.

Advantages

- ▲ Solvent free, environment friendly.
- ▲ Single pour casting up to 50 mm
- ▲ High transparency
- ▲ Good UV resistance.
- ▲ Self-air release.
- ▲ Low viscosity
- ▲ Exceptional clarity
- ▲ Easily applied.
- ▲ Hard wearing and highly polishable.
- ▲ Can be colored.

Technical Properties @ 20°C:

Colour:	Clear
Density:	1.10 ± 0.05 g/cm ³
Mixed viscosity:	900 cP
Application temperature:	15°C to 30°C Typically applied at 20°C to 25°C
Pot life:	35 - 40 min
De-molding time:	48 hr
Full cure:	7 days
Shore D hardness: ASTM D2240	> 80 @ 7 days
Elongation: ASTM D638, Type I	4 ± 1%
Flexural strength: ASTM C580	> 70 MPa @ 7 days

Method of Use

Substrate Preparation

The Substrate or mold should be clean and free from dust, water or any contamination.

Embedments

Any material that is going to be embedded within the resin, such as dry flowers, stones, crushed glass, leaves, etc. should be completely clean and dry.

Priming

Depending on the material of the mold, a wax release agent may be necessary to prevent bonding on models and ensure an easy de-molding.

Wood or porous surfaces of models, where the material will not be de-molded, must be sealed by applying a thin layer of Strongcoat CL Casting before casting.

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Mixing

Measure the correct amount of Strongcoat CL Casting base and hardener carefully, 100 parts base: 45 parts hardener (by volume), stir the components separately to disperse any settlement, transfer the entire content of hardener into the base and mix for 2 - 3 minutes by hand using a suitable mixing stick or use a slow speed mixer fitted with suitable paddle until a uniform colour and consistency are achieved.

Transfer the mixed resin and hardener into another clean container and thoroughly mix again for a further 1 - 2 minutes in order to eliminate using unmixed resin from the bottom or sides of the original container.

After complete homogenization of the mixture, colour pigments or tints can optionally be stirred in.

Note: if mixing was conducted using a slow speed mixer, the resin should be degassed in a degassing chamber before use.

Application

Scrap the walls of the mixing container. Use a vacuum chamber or leave the mix for at least 15 to 30 minutes for self-degassing prior to casting.

Strongcoat CL Casting can be poured in place at thicknesses up to 50 mm per layer. For multiple layers, pouring can take place over:

- ▲ Partially cured layer: where the resin has firmed up, so that it is no longer a liquid, (no resin should come off on your glove after pressing a finger nail into the resin), no surface preparation is required and the new resin will bond chemically with the previous layer.
- ▲ Fully cured layer: allow the previous layer to fully cure and then use a coarse abrasive paper to scrape the whole surface of the cured layer to allow the new resin to mechanically bond to the previous layer.

To enhance air bubble release, immediately after pouring in the mold, use a heat-gun or gas torch to expel air that has been entrapped while mixing and pouring, Hold the torch 100 to 150 mm off the surface and keep moving back and forth across the surface of the resin and make sure not to over-heat the resin.

Make up another small batch of resin after a few hours if required.

Curing

Allow the resin to fully cure to give the hard finish desired. The resin will achieve an initial cure in approximately 48 hours - temperature dependent.

Remarks

- ▲ While mixing, ensure not to incorporate too much air.
- ▲ For optimum results, Strongcoat CL Casting should be used and cured at ambient temperature between 20°C and 25°C as working in higher ambient temperatures will cause the resin to cure faster which offers an increased risk of exotherm, while lower ambient temperature will make it harder to mix and less able to release air bubbles during the cure. The resin will also take longer to cure.
- ▲ Application should not be undertaken if the temperature is below 15°C, nor when the relative humidity exceeds 70%.
- ▲ Although the product is with good UV resistance, slight color change may occur.
- ▲ While curing, avoid opening doors and windows to reduce the chance of dust and debris contaminating the resin.
- ▲ Flattening and polishing should be carried out after resin is fully cured.
- ▲ Unsatisfactory results are usually caused by unsuitable ambient temperatures, improper mixing or casting thicknesses.
- ▲ Divide the casting quantity into several layers with a waiting period of 48 hours in between



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- ▲ Surface treatments
- ▲ Grouts and anchors.
- ▲ Concrete repair.
- ▲ Flooring systems.
- ▲ Protective coatings.
- ▲ Sealants.
- ▲ Waterproofing.
- ▲ Adhesives.
- ▲ Tile adhesives and grouts.
- ▲ Building products.
- ▲ Structural strengthening.

Cleaning

All tools should be cleaned immediately using DCP Solvent. Hardened material must be cleaned mechanically.

Packaging

Strongcoat CL Casting is available in 1 kg (0.90 litre), 5 kg (4.55 litre) and 20 kg (18.20 litre) packs.

Yield

Approximately 0.9 litre per 1 kg of mixed material.

Storage

Strongcoat CL Casting has a shelf life of 12 months from date of manufacture if stored in dry conditions at room temperature in original unopened packs.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

Cautions

Health and Safety

Strongcoat CL Casting should not come in contact with skin or eyes. Goggles and gloves should be used. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

For further information refer to the Material Safety Data sheet.

Fire

Strongcoat CL Casting is nonflammable.

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Note:

We endeavor to ensure that any advice, recommendation or information we may give in product literature is accurate and correct. However, due to the fact that we have no direct or continuous control over where or how the products are applied, DCP cannot accept any liability either directly or indirectly arising from the use of DCP products, whether or not in accordance with any advice, specification, recommendation or information given by us.

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