

## CHEMRITE® CLEAR CASTING EPOXY

### Product Description

CHEMRITE® Clear Casting Epoxy is a versatile high strength epoxy system with good structural properties and good chemical resistance suitable for a variety of casting projects.

CHEMRITE® Clear Casting Epoxy is manufactured as a 2 to 1 clear epoxy resin compound and it can be pigmented to any desirable colour. This epoxy mix is an excellent choice for artworks such as river tables, chopping/bread boards, coasters, paintings on canvas, trophies, or any other artistic creations.

### Features

This mix has been formulated to be easy to work with. It releases bubbles effortlessly when a heat gun is used. It also has low exotherm properties, which means it will not get as hot as some other epoxies used.

CHEMRITE® Clear Casting Epoxy cures after only 24 hours.

Key Attributes:

- Clear
- 2:1 mixing ratio
- Easy to apply – great for artists
- Low to zero VOC's, which means low smells
- Industrial grade epoxy resistant to most chemical spills
- Easy to clean

### Typical Applications

- Artworks
- River Tables
- Chopping Boards
- Bread Boards
- Coasters
- Trophies
- Statues

## Properties

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Pot Life (@25°C, 55% RH)</b> | 60 minutes            |
| <b>Shelf life</b>               | 12 months             |
| <b>Colour</b>                   | Clear                 |
| <b>Mixing proportion</b>        | Part A to Part B, 2:1 |
| <b>Initial Curing Time</b>      | 24 hours              |

## Preparation and Application

### Preparation

Preparation is one of the most important steps before starting your project. Even though epoxy bonds extremely well to most materials, it is fundamental to ensure that the surface to be coated, cast on, or glued is free from loose particles and oils. To be sure, first vacuum your substrate thoroughly, making you all loose particles are removed. If your substrate does not have a clean surface, you will need to remove any contaminants such as oil or grease impregnated on your substrate. The best way to do this is to use a strong soap or solvent and work it into the substrate. Once done thoroughly wash the area clean and let it dry.

### Moulds

CHEMRITE® Clear Casting Epoxy will strongly adhere to most common materials such as timber, concrete cardboard, and steel. However, it will typically not readily bond to silicone products, which makes silicone moulds ideal for casting projects. Some smooth surface plastics may also be used for moulds, but trials must be carried out first.

All moulds should be coated with a mould release agent. If a mould release agent is not applied to the mould, CHEMRITE® Clear Casting Epoxy will tend to adhere to it and will make demoulding more difficult.

Mould selection must be such that it will allow for easy demoulding once the epoxy has cured. Proper planning is required as to how the mould will be removed from the final product. For example, CHEMRITE® Clear Casting Epoxy will strongly adhere to timber if not properly sealed, regardless of if a mould release agent is applied to it. Thus, if you use unsealed timber, you must be prepared to damage the mould and grind off the surface of the cast epoxy to remove any timber pieces attached to it.

It is recommended that some debonding trials be completed on your selected mould material and mould release agent before completing your project.

## Mix Preparation

### Epoxy Compound

Epoxy can irritate your skin or eyes, so it is strongly recommended to use appropriate personal protective equipment when handling epoxy. Gloves and safety glasses should be worn as a minimum. Read product SDS before use.

CHEMRITE® Clear Casting Epoxy is a 2:1 epoxy system. This means that 2 parts of Part A are required for 1 part of Part B. Only mix the amount of epoxy that you will be able to apply within a 20-minute timeframe. This is basically the time you will have before your epoxy starts becoming hard.

The pouring depth must be considered in advance. The maximum depth of pour is dependent on several factors; however, all factors revolve around temperature. As the epoxy mix reaction is exothermic, the larger the pour the faster it will cure, heat up and potentially discolour or form irregularly. Doing the pours in thin layers is always recommended. Trials should always be done first, as pour size, humidity and ambient temperature will directly affect heat development and epoxy behaviour.

Typically, it has been found that that at 25 degrees, CHEMRITE® Clear Casting Epoxy can be successfully poured up to a depth of approximately 15mm. Nevertheless, it is highly recommended that trials are complete at the specific job conditions before completing the actual project, as simple factors such as mould material can affect the result.

### Steps for mixing the epoxy:

1. Do not leave the containers in direct sunlight as heat will accelerate curing. If the containers are hot, leave them in a cool place to cool off before mixing.
2. Add 2 parts (volume) of Part A to 1 part of Part B in a separate container. For example, for 200 ml of part A add 100ml of part B.
3. Mix the compound well with a handheld paint stirrer for a minimum of 2 minutes. It is possible to mix using a drill and paddle if one is available, but mixing should be done at a very slow speed to avoid adding air bubbles to the mix. Jiffy mixers are ideal for mixing epoxy as they limit aeration of the mix. Once a uniform consistency is achieved, the epoxy is ready to be applied.

## Application

Once you epoxy compound is mixed, you are ready to apply. As the mix has an approximate pot life of 60 minutes at 25°C (refer to properties table above), you must plan to complete the work within 20 minutes. Pot life decreases as ambient/mix temperature increases. Also, once Part A and part B are mixed, the temperature of the mix will start to rise.

### How to apply:

1. Coat mould with a mould release agent.
2. Using a pouring jug, pour epoxy mix into mould ensuring all corners of your mould are filled.
3. Apply the epoxy in layers of no more than 15mm thick. This will help avoid overheating of the mix. See Epoxy Compound section.
4. Once a layer is complete, let it cool down before applying the next layer.
5. Repeat steps 2 to 4 as required.
6. Once all layers are completed, let epoxy cure undisturbed for a minimum period of 24 hours from the last layer poured.
7. After 24 hours mould can be removed.

### Cleaning

All tools and spillages can be cleaned using warm water and soap. Remaining epoxy that has cured can be disposed of as general waste. Contact your local council for advice on disposal of used paint cans.

**Note:** For easy cleaning, CHEMRITE® Epoxy Cleaner can be used. CHEMRITE® Epoxy Cleaner is a water-soluble solvent that can be used with most epoxies. It is used to keep tools clean and assists in cleaning up any spillages.

### Packaging

CHEMRITE® Clear Casting Epoxy is packaged in 1, 3, 6, 15 and 60 litre kits.

### Safety Precautions

Whenever applying an epoxy resin, protective clothing must be worn. At a minimum, suitable rubber gloves and protective eyewear must be worn.

This epoxy is classified as hazardous. It is recommended that you refer to the product Safety Data Sheet (SDS).

### Product Disclaimer

This Technical Data Sheet (TDS) summarises to the best of our knowledge the product and how to use and apply the product based on the information available to us at the time. It is recommended that you read this TDS and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. If you are uncertain about any content herein, it is strongly recommended that you contact one of our technical experts for advice. Our responsibility for products sold is subject to the Chemrite Technologies standard terms and conditions of sale. We do not accept any liability for any losses suffered for damages of any nature whatsoever resulting from the use of or reliance upon information or the product to which information refers.