

CASTING EPOXY RESIN

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

For applications furniture, art and decoration to make deep pour transparent and UV resistant castings such as river table, embeddings, mock-ups, trophies

PRODUCT FEATURES

- ◆ Up to 50mm Thick per pour @ 20C
- ◆ Good UV Resistance
- ◆ Nonylphenol Free - Non-Toxic - VOC FREE
- ◆ Good water resistance after a short maturation period
- ◆ Low viscosity
(As required in Casting, easily maleable and penetrating)
- ◆ 100% Solid, High Gloss, Odourless
- ◆ Crystal Clear Transparency - High Gloss Finish
- ◆ Slow Curing - Self Degassing Behaviour

PRODUCT APPEARANCE

Epoxy Component A - epoxy resin, unfilled, bluish-transparent
Epoxy Component B - amine, unfilled, transparent

PACKAGING UNITS

Various packaging presentation to combine:
725ml - 1.45kg - 2.9kg - 7.25kg - 14.5kg - 29kg



MECHANICAL & THERMAL PROPERTIES

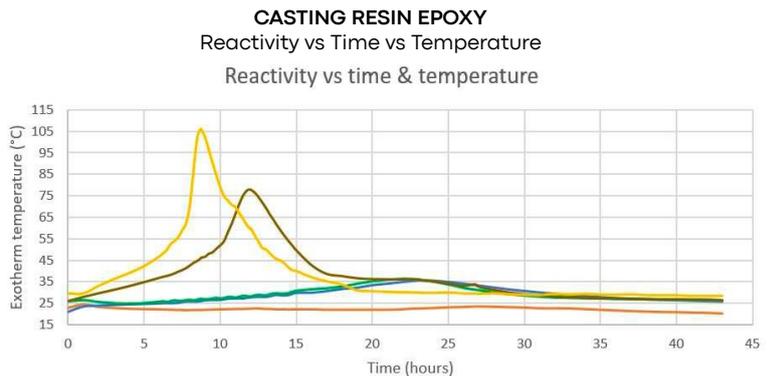
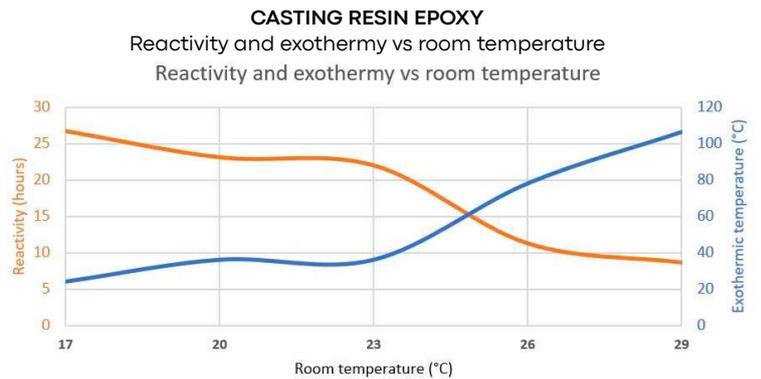
approx. values on standard-sized specimen / after curing 7 days at room temperature

Shore hardness	ISO 868	Shore D1	D 80
Elongation at maximum strength	ISO 527	%	4,5
Flexural modulus	ISO 178	MPa	2,100
Glass transition temperature (TG)	ISO 11359-2	°C	39
Glass transition temperature (TG) after 16H at 50 C	ISO 11359-2	°C	47

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)
Components		Casting Epoxy Part A	Casting Epoxy Part B
		~500	~100
Mixing Ratio in Parts by weight		100	45
Mixing Ratio in Parts by volume		100	50
Mixture			
Colour		transparent	
Viscosity 25°C	mPa.s	~300	
Reactivity on 500 g, 23 °C (Max. exothermic temperature)		h ~ 17 °C ~50	

* refer to the graph below, influence of room temperature (RT) on exothermic reaction and curing time on 500 g casted in a plastic cup in thickness 90 mm



SPECIFIC PROPERTIES

Maximum casting thickness on plate 350 x 300 mm

	Room temperature	Thickness (mm)
Lowest temperature to work with	17 °C	80
	20 °C	45
	23 °C with fan	70
	23 °C	35-40
	23 °C	30
Highest temperature to work with	29 °C	25

PRODUCT APPLICATION GUIDE

Room temperature is the most important parameter to be successful in Casting Resin Epoxy casting. There is a link in between room temperature (RT), volume of cast resin and curing speed. A speed curing caused by warm RT creates high exothermic reaction and cured resin could be yellow with streaks on top.

Ensure Component A is not crystallised due to low temperatures and completely dissolve (give it a warm bath and ensure Resin temperature itself is between 17C to 30C for at least 24 hours before application).

Above 4kg volume and a casting height of more than 40mm it is recommended to decrease the exothermic temperature by using a fan or reducing the room temperature. Mixing should be done by hand or with an electric mixer. Be careful not to incorporate too much air while mixing. Emulsion must be avoided.

After a primary mixing in a bucket pour the product in a second bucket and finish the mixing. Scrap well the walls of the mixing container. Leave the mixing for a selfdegassing for at least 15 to 30 minutes prior to cast or use a vacuum chamber.

According to long pot life and low viscosity the casting frame must be perfectly tight. Brown PE packing tape is self-releasing from the resin and could be used in corners of the box and anywhere resin should not bond on support.

A liquid or pasty wax could be also used to prevent bonding on models and supports. The wood or porous surfaces of models must be sealed before casting the resin. Quick setting epoxy or a varnish could be used but sealer must be cured prior to casting of Casting Resin Epoxy.

After casting and some relaxation time the remaining bubbles can easily be removed with a hot airstream gun (sweep the surface at 15 – 20 cm of distance).

A thin sanding and polishing are almost always needed to get shiny and flat surface. Use appropriate tools in order to avoid heat on the resin when polishing. Water sandpaper is advised.

Prolonged intensive UV exposure can lead to optical changes or changes in transparency.

The application guidelines stated above are serve as professional advice only and sample test should always be carried out prior to use.

STORAGE CONDITIONS

Shelf Life	Casting Epoxy Part A	12 Months
	Casting Epoxy Part B	12 Months
Storage Temperature	Casting Epoxy Part A	15-25°C
	Casting Epoxy Part B	15-25°C
Crystallization	_ After prolonged storage at low temperature, crystallization of A (RESIN) component may occur. _ This is easily removed by warming up for a sufficient time to a maximum of 70°C. _ Allow to cool to requested processing temperature before use.	
Opened Packaging	Containers must be closed tightly immediately after use to prevent moisture ingress. The residual material needs to be used up as soon as possible.	

DISPOSAL OF CONTAINERS

Empty containers must be handled with the same precautions as if they were full. Treat empty containers as hazardous waste, and transfer them to an authorized waste manager. If the containers still have some material left, do not mix with other product before considering the risk of potential dangerous reactions.

ADDITIONAL INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of SINDEC Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets

ACCURACY OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY DATA

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

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