

R-CAST



Description

R-CAST is a 100% solid, two component epoxy casting system. It is used for mass castings with thicknesses greater than 1 inch. R-CAST is designed for casting, potting and embedding applications. The low color and low viscosity allow for bubble free, crystal clear castings ideal for art and hobby applications. It is formulated for a long gel time, with low exothermic heat buildup. R-CAST has a low VOC content, for user safety and reduced environmental impact. This system is approved by the Canadian Food Inspection Agency. It also meets FDA and USDA requirements.

Primary applications

- ✓ Embedding and encapsulation
- ✓ Resin jewelry
- ✓ Resin castings
- ✓ Bar top or table top epoxy
- ✓ Molding resin
- ✓ Art or crafting resin
- ✓ High build coatings
- ✓ Mass castings

Advantages

- ✓ 100 % solids, low VOC content and low odor
- ✓ Crystal clear and high gloss appearance
- ✓ Magnifies object appearance
- ✓ Self-levelling
- ✓ Dense surface resistant to bacteria and moisture
- ✓ Excellent air release qualities
- ✓ Will not distort with age

How to calculate the amount of epoxy for your project

The simplest way to calculate the amount of R-Cast required is to measure the cubic inch (in³) and convert it to liters. To obtain the po₃, you must perform the following calculation:

Example of an epoxy river table

10inches (*average width of the epoxy river*) X **72**inches (*table length*) X **2**inches (*table thickness*) = **1440** cubic inches

1440 divide by **61**(conversion factor in liters) = **23.5** Liters

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TECHNICAL SPECIFICATIONS AND MECHANICAL DATA	
Color	Clear
Mix Ratio by Volume	2:1 (resin: hardener)
Mix Ratio by Weight	100:45 (resin: hardener)
Mixed Viscosity @ 25° C	500 cps
Pot Life @ 25° C	360 minutes (6 hours)
Tack-Free Time @ 25° C	84 hours
Ideal Working Temperature Range	Optimal 24 - 27°C
Castable Thickness	Up to 2 inches thick for 1 pour
Peak Exotherm	38°C (100°F)
Recommended Full Cure	7 days @ 25°C
Tensile Strength	9500 psi
Elongation	6.7%
Flexural Strength	15500 psi
Compression Strength	11700 psi
Tg Ultimate	95°C (203°F)
Hardness, Shore D	70 - 80
VOC g/L	< 10 g/L

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Preparation

➤ Mold (foundation)

- 1-Use a plywood or melamine sheet and cover it with red "Duck tape".
- 2-Prepare the sides in the same way. Screw the sides on the tray using silicone to make a mold 100% waterproof. We strongly advise to make the bigger mold about 1.5inches, leftover will be cut at the end of the project.
- 3-As a precaution, apply a second silicone seal out of the mold to reduce the chances of leakage.
- 4-Clean the excess silicone (Leave to dry for at least 8 hours before pouring the R-Cast).

➤ Wood preparation

- 5-Prepare the wood (pre-cut and planing).
- 6-Remove the bark and carefully clean the residues in it to allow the epoxy to adhere to the wood. A improper cleaning of "edges" may lead to poor long-term results.
- 7-To prevent the formation of bubbles, seal the "edges" with a faster setting epoxy (R-Epoxy) .Wait 8 hours before pouring.

➤ Wood and foundation assembly

- 8-Under the pieces of wood, pull a silicone seal around the cracks. In this way, you prevent the product from spreading in the mold.
- 9-Put pieces in the mold. Using clamps, hold the pieces firmly against the bottom of the mold (to avoid them to float at the moment of casting).
- 10-On the top, pull a silicone seal around the cracks and knots (let it dry at before pouring the R-Cast).

➤ Final preparation

- 11-Mix according to the ratio 2A for 1B. Mix for 5 minutes.Mixing counter-clockwise will create less bubbles.
- 12-Add pigments (if necessary) until the desired result is achieved. We recommend to mix pigments another 2 minutes.
- 13-The reference temperature 21degrees. Use fans to prevent the product from overheat during catalysis. Turn off the fan 24h later.
- 14- 5 to 7 days later, unmould the piece and start preparation (planing / sanding, final cut according to dimensions).

IMPORTANT

-For thick / massive pour, your biggest enemy is the heat generated by the chemical reaction. You must control your environment by using fans to dissipate heat. Heat accelerates hardening, which can cause cracks and bubbles in the epoxy. The longer the curing time will be, the better your project will be.

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Cleaning

Clean all application equipment with Xylene

Restriction

- R-CAST should be kept in a dry place between 24 and 27 ° C, out of the sun and children.
- Resin and hardener should not be left in an open container
- The application should be used when the humidity is below 60% and the temperature is between 18 and 25 degrees (ideal 21 degrees)
- Use a dehumidifier if necessary
- R-CAST must be used within one year of purchase
- Surfaces may fade in areas exposed to ultraviolet light within time

Health and safety

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation. Consult the material safety data sheet for further information.

Important notice

The information and recommendations contained in this document are based on reliable test results according to Ryver Epoxy. The data mentioned are specific to the material indicated. If used in combination with other materials, the results may be different. It is the responsibility of the user to validate the information therein and to test the product before using it. Ryver Epoxy assumes no legal responsibility for the results obtained in such cases. Ryver Epoxy assumes no legal responsibility for any direct, indirect, consequential, economic or any other damages except to replace the product or to reimbursement the purchase price, as set out in the purchase contract.