

Magic CAST

Description

Magic CAST is a 100% solid, two component epoxy casting system. It is used for mass castings with thicknesses greater than 1 inch. Magic 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. Magic 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

 **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 4 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

SURFACE PREPARATION

The surface to be coated must be well dry and free of dust, wax, grease or oil.

MIXING

Pour the epoxy maximum 4" thick per layer. Mix only the amount that you need at one time and pour the mixture within 15 minutes. Unused resin and hardener should be left in original containers. Mix exact amounts of both resin and hardener in separate mixing cups. Do not add more hardener than resin, as this will cause the finished coating to remain sticky. Inaccurate measuring will cause epoxy surface to remain soft or sticky spots on the epoxy surface.

APPLICATION

Warm up the Magic CAST resin and hardener to 24 - 27 ° C. This will improve the flow characteristics and bubble release. In a dry, clean container mix 2 parts of resin with 1 part of hardener. Be sure to scrape the sides and bottom of the mixing container while mixing. Mix for 3-4 minutes using a paint paddle. After mixing, transfer the mix into a similar mixing container and mix again for another 1-2 minutes.

Pour material into the mold. Wait 15 - 20 minutes then lightly pass a lit propane torch over the surface at a 45°-degree angle with the tip of the torch being at least 6 inches from the surface until all bubbles are gone. The carbon dioxide at the end of the flame helps facilitate bubble release and popping the bubbles. This will help ensure a glass like finish. If latent bubbles exit, a similar torching at 30 minutes may be needed. Drips may be sanded off after the item has cured.

CLEANING

Clean all application equipment with acetone. Once the product has hardened, it can only be removed by sanding. It is advisable to clean immediately after use

Thickness (in)	Thickness (in)	Thickness (mils)	Coverage (sq.ft. /gal)	Coverage (gal. /sq.ft)
1/8"	0.1250	125	12.80	0.08
1/4"	0.2500	250	6.40	0.16
3/8"	0.3750	375	4.27	0.23
1/2"	0.5000	500	3.20	0.31
5/8"	0.6250	625	2.56	0.39
3/4"	0.7500	750	2.13	0.47
7/8"	0.8750	875	1.83	0.55
1"	1.0000	1000	1.60	0.63
1 1/8"	1.1250	1125	1.42	0.70
1 1/4"	1.2500	1250	1.28	0.78
1 3/8"	1.3750	1375	1.16	0.86
1 1/2"	1.5000	1500	1.07	0.94
1 5/8"	1.6250	1625	0.98	1.02
1 3/4"	1.7500	1750	0.91	1.09
1 7/8"	1.8750	1875	0.85	1.17
2"	2.0000	2000	0.80	1.25
2 1/8"	2.1250	2125	0.75	1.33
2 1/4"	2.2500	2250	0.71	1.41
2 3/8"	2.3750	2375	0.67	1.48
2 1/2"	2.5000	2500	0.64	1.56
2 5/8"	2.6250	2625	0.61	1.64
2 3/4"	2.7500	2750	0.58	1.72
2 7/8"	2.8750	2875	0.56	1.80
3"	3.0000	3000	0.53	1.88
3 1/8"	3.1250	3125	0.51	1.95
3 1/4"	3.2500	3250	0.49	2.03
3 3/8"	3.3750	3375	0.47	2.11
3 1/2"	3.5000	3500	0.46	2.19
3 5/8"	3.6250	3625	0.44	2.27
3 3/4"	3.7500	3750	0.43	2.34
3 7/8"	3.8750	3875	0.41	2.42
4"	4.0000	4000	0.40	2.50

Example: To cast a table **2 feet x 4 feet** at a height of **3"**. Total area is 8 sq ft.

You will need $(8 \times 1.88) = \mathbf{15.04 \text{ gallons}}$

RESTRICTIONS

- Magic CAST should be stored in a dry place between 24° C and 27° C, out of the sun and out of reach of children
- Resin and hardener should not be left in an open container
- Application should be used where humidity is under 60% and temperature is between 21°- 29°C
- Use a de-humidifier if needed
- Magic CAST should be used within one year of purchase
- Surfaces may discolor in areas exposed to regular ultraviolet light

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 Magic Resin. 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. Magic Resin assumes no legal responsibility for the results obtained in such cases. Magic Resin 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.