55 Hilton Street, Easton PA 18042
(269) 488-4000
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TECHNICAL DATA SHEET

Amazing Casting Resin

Alumilite's Amazing Casting Resin provides users with an extremely user-friendly rigid urethane that has good overall physical and cosmetic properties. The low viscosity along with the white appearance makes this material ideal for users who are looking for perfect cosmetics in their castings. We always recommend warming the mold before casting to achieve a more consistent and thorough cure.

PRODUCT SPECIFICATIONS	
Mix Ratio	1:1 by weight or volume
Mixed Viscosity	90 cps
Working Time	2.0 minutes
Demold Time	5.0-10.0 minutes
Heat Deflection	185ºF
Hardness	72-D
Full Cure Time	3 Days or 16 Hours @ 150ºF
Tensile Strength	4500 psi
Elongation Strength	10-12%
Shelf Life	1 year
Color	White/Black/Tan

BEFORE USE: Thoroughly read Safety Data Sheets, product labels and the “SAFETY” section in this Technical Data Sheet.

IMPORTANT: PLEASE NOTE

- It is critical that your frame or mold is watertight. Frames should be built out of material that can easily dissipate heat.
- We do not recommend pouring over bark, as bark can hold excessive air and moisture.
- This product should not be poured directly over an oil-based paint or stain, as oil and epoxy do NOT mix. There should be a definitive barrier between the two products. We suggest applying a water-based clear coat over the oil-based product. If the water-based clear coat leaves a high gloss or shine, we suggest scuffing the surface with 320-grit to allow the epoxy to properly adhere. Once sanded, clean the surface thoroughly with Isopropyl Alcohol 99%. Then you can apply the epoxy.
- This product is not intended for permanent outdoor use or direct UV exposure.
- Can be poured up to 2" thick in small quantities. Larger pours (3 or more gallons) may be poured in layers of 1.5" or less. When pouring more than 5 gallons at one time, layers of 1" or less may be necessary to prevent excessive heat generation.
- This product can be mixed with pigment powders and liquid dyes to achieve your desired color. Do not mix any oil or water-based products with the resin. When in doubt, test a sample batch to ensure you can achieve your desired color without issues.
- Storing Unused Resin – Unmixed resin & hardener have a long shelf life of 1 year. Store in original containers in a cool, dry place. Over time, the unused material may yellow/amber as expected with most epoxies.
- As with all epoxy chemistry, ACR will develop a yellow hue over time. Many times, this is not ever noticed based on the underlying surface color, although in applications where ACR is applied over bright white surfaces or when pouring thicker layers, yellowing may be more evident. Adding Alumilite dye, Alumidust, or Polycolor powder to color the resin can negate or minimizes the yellowing, although shifts in color can occur over time.

BEFORE YOU BEGIN

Work Environment: The ideal working temperature is around 65-75°F in a clean, dry, dust-free environment. Avoid working in high humidity. If you are pouring in large volumes of 2 or more gallons, we suggest keeping room temperature closer to 65°F. We highly recommend keeping fans on your project to help dissipate heat.

Coverage: You can use the coverage calculator on our website to determine the volume of mixed resin that you will need before you begin your project. Please remember, this is not an exact science, as each project is different and each substrate will absorb the epoxy differently. As the product fills the cracks and crevices in your mold, the level may drop. Be prepared to add more epoxy as needed. The calculator does not take into account embedded objects. It is always best to have more than enough material on hand to ensure completion of your project.

Seal Coat: A thin seal coat may be necessary when working with a porous surface or object. Some surfaces may contain both air and moisture that can contaminate the finish. We suggest applying a thin

coat of ACR as a seal coat. Other water-based clear coats may also be used. To ensure proper adhesion, we suggest scuffing the surface of the epoxy or clear coat with 320-grit once cured. Do NOT use over an oil-based paint or stain.

Materials: Be prepared with all necessary materials and tools before beginning your project.

- Powders & dyes
- Stir-sticks
- Utensils to shape material
- Molds for artistic creation
- Misc. handling tools – scissors, pliers, a drill or Dremel tool, heat gun, blow torch, etc.

MIXING & POURING

Step 1: Amazing Casting Resin has work time of 2 minutes. Larger amounts of mixed resin will shorten your work time as will warmer ambient temperatures. The mix ratio of the Amazing Casting Resin is 1:1 by volume or weight Measure each side separately to ensure accuracy.

Step 2: The material must be mixed thoroughly for at least 1minute. Pour together into a mixing container and mix slowly until absolutely no swirls are seen, scrape sides and bottom thoroughly. When mixing volumes greater than 1 gallon, a low speed drill mixer is recommended, although you must still stop and scrap sides and bottom of mixing container periodically to ensure complete mixing. Once mixed, immediately pour resin into casting area or mold. Slowly pour close to surface and in one area to avoid introducing additional air bubbles. Note that resin should not sit in mixing container or heat will build and prematurely begin to cure. Note: Varying the mix ratio will alter the cure and change the physical properties in a negative ways such as tackiness or uncured surfaces. When mixing multiple batches, it helps to have a dedicated side A and side B measuring container.

Step 3: Pour the mixed resin into the mold or onto surface of project. Do NOT scrape out the last of the resin onto your project as unmixed epoxy on the sides or bottom of the container could contaminate your project, leading to curing issues.

Step 4: To remove air bubbles that have risen to the surface of the poured resin, use a heat gun or torch in a sweeping motion across the surface, holding the heat source approximately 6-1O inches away from the surface until no bubbles remain. Avoid heating any one spot for too long so as to prevent any distortions in the finish. When pouring deeper sections, it is recommended to pour 1/2 inch at a time, then wave a propane torch approximately 6-10 inches from the surface to assist with popping of air bubbles. This layering method creates a shorter distance for air bubbles to travel and escape, versus pouring the entire thickness at once. Once air bubbles subside, the next layer can be poured, repeating the same process until you reach your desired depth.

Step 5: Curing times can vary greatly by project, depending on mass and temperature. Open time ranges between 5-10 minutes, full cure 3 days. Do not use or place any items on your project during this time.

Step 6 (optional): If you are going to make a second pour, the first pour should be firm but tacky to the touch. If you wait until the surface is well cured, a light sanding is suggested before the recoat to ensure proper adhesion. We suggest scuffing the surface with 320-grit. Once sanded, clean the surface thoroughly with Isopropyl Alcohol 99% to remove any dust and debris.

CLEAN UP & DISPOSAL

Tools can be cleaned with T-12, Isopropyl Alcohol 99% or a residue-free cleaner. Do not use soap and water. Dispose of product and container according to Federal, State and local regulations. Store any remaining product in the original bottles, tightly sealed and locked up in a cool, dry environment.

SAFETY

Safety: Before use, thoroughly read Safety Data Sheets and product labels. Follow safety precautions and directions.

- Wear gloves
- Safety glasses
- Protect clothing with a work smock or other outer garment
- For cleaning surfaces, containers – use Acetone, rubbing alcohol or nail polish remover
- When stored separately, epoxy & hardener have long shelf lives – store in a cool dry area in tightly sealed containers

Resin: Keep out of reach of children. If needed, a NIOSH-approved respirator with organic vapor cartridge may be used. Wear impervious gloves, such as butyl rubber or nitrile rubber. Wash skin thoroughly with soap and water after handling. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical help. Wear eye protection, such as chemical safety glasses/googles. If in eyes, rinse cautiously with water for several minutes, removing contact lenses if present and easy to do. If eye irritation persists, get medical help.

Hardener: Keep out of reach of children. Do not eat, drink, or smoke when using this product. If swallowed, rinse mouth and get medical help. Use with adequate general or local exhaust ventilation to minimize exposure levels. If needed, a NIOSH-approved respirator with organic vapor cartridge may be used. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Wear impervious gloves, such as butyl rubber or nitrile rubber. Wash skin thoroughly with soap and water after handling. Wear eye protection, such as chemical safety glasses/googles. If in eyes, immediately rinse with water for several minutes, removing contact lenses if present and easy to do. If eye irritation persists, get medical help.

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WARNING: THE CURE REACTION IS EXOTHERMIC. Do not apply in thicknesses greater than the recommended maximum application thickness for the product.

DISCLAIMER: The information contained herein is considered accurate; however, Alumilite makes no warranty regarding its accuracy. The user must determine the suitability of the product for the intended use and accepts all risk and liability associated with that use.