Working Conditions

Working with the resin outside of the recommended temperature range can be challenging and can result in a poor-quality casting. The following actions may help reduce the negative effects of pouring in either warm or cool conditions.

In warm conditions, the resin may overheat during cure. This can result in much shorter working time, cure time, shrinkage, cracking, and discoloration.

- Elevate your mold off the worktable and set up a fan to blow across your casting to help dissipate heat.

In cool conditions, the resin may be thick and tough to mix, and it may be difficult to remove entrapped air by torching. The curing reaction will be slowed significantly, and if too cold, the resin may not cure at all.

- Increase the temperature of the workspace, worktable, mold, and epoxy. Jugs can also be placed in a warm water bath until the resin and hardener reach 22°C/72°F. The water should be warm to the touch, not hot. Do not allow water to contaminate the epoxy. Wipe bottles dry before use.

Materials & Supplies

- FlowCast SPR resin and hardener
- EcoPoxy Pigments (metallic or liquid)
- Mold (reusable or sheathing tape mold)
- Prepared wood slabs
- Containers for mixing resin (multiple sizes with volume markings)
- Mixing sticks
- Worktable covered with plastic sheet
- Paper towel or rags
- Denatured or isopropyl alcohol
- Torch
- PPE: Nitrile gloves, safety glasses, work apron or shop coat
- Optional: scale, infrared temperature gun, Shore D durometer

Customer Support

For customer support, email inquiries@ecopoxy.com or call 1.855.326.7699 and ask for Customer Support.

Une version française de cette brochure, ainsi que d'autres instructions sur le produit et son application, sont disponibles sur la page FlowCast SPR du site web EcoPoxy.

Una versión en español de este folleto, así como más instrucciones sobre el producto y su aplicación, están disponibles en la página de FlowCast SPR del sitio web de EcoPoxy.

Visit ecopoxy.com for more professional quality epoxy products and accessories.

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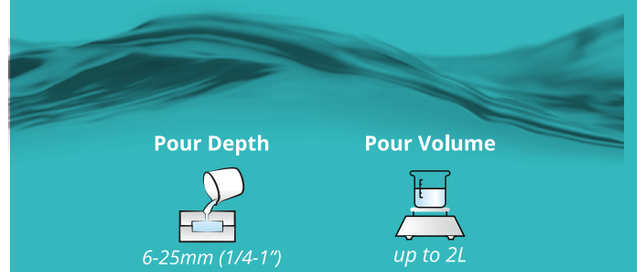
FLOWCAST® SPR

The Premium Casting Epoxy for Small Projects

Usage Instructions & FAQ



Important:

This document introduces the proper use of FlowCast SPR. Read all instructions carefully before using this product. For product information and additional tips, including mold building, wood preparation, finishing steps and more, please visit the SPR product page on our website to download the FlowCast SPR Technical Data Sheet, Application Guide, and Safety Data Sheets.

Product Information

Pour Depth: 6-25mm (1/4-1") for pours up to 2L
Mix Ratio: 2:1 by volume
Working Time (in mold): 4-5 hours†
Time to Finishing: 1 day or less for 25mm (1") pour†
Full Cure: 3 days†
†Times are based on 25 mm (1") deep casting at a volume of 1.7L. Individual project times may vary depending on pour depth, volume, ambient temperature, and humidity.
Working Temperature: Resin, mold, and workspace temperatures should be 20-25°C (68-77°F)
Storage Temperature: 15-25°C (59-77°F)

Storage & Disposal

Store in a cool, dry, well-ventilated location, out of direct sunlight. Protect from freezing and physical damage. Do not store in a location subject to frequent temperature changes as the product may crystallize. If storing remainder of the product for another project, keep containers tightly closed.

Fully cured resin is inert and can be disposed of with regular waste. Uncured resin and hardener should be treated as hazardous waste and must be disposed of in accordance with federal and/or local regulations.

Safety

FlowCast SPR is a low odor product and can be used in a well-ventilated workspace without respiratory protection. Uncured epoxy resins are chemicals, and clothing that protects the whole body from splashes should be worn when using them. Personal protective equipment such as gloves and safety glasses must be worn to avoid the risk of skin and eye exposure. Wash hands with soap and water before eating or drinking.

Eye exposure can result in permanent damage. In the event of contact with eyes, irrigate with plenty of gently flowing lukewarm water for 15 minutes and seek immediate medical attention.

Refer to the FlowCast SPR Safety Data Sheets, available at ecopoxy.com, for full safety information.

Work Area Setup & Cleanup

- Work area should be clean, dry, and free of dust.
- Check that the ambient temperature is within the recommended range of 20-25°C (68-77°F).
- Be careful not to contaminate objects such as doorknobs or light switches with soiled gloves. You may transfer uncured resin to these surfaces.
- Using a clean rag, wipe tools and small spills with denatured alcohol, isopropyl alcohol, or warm soapy water.
- For larger spills, contain and collect spillage and place in a suitable container, such as a polypropylene or polyethylene pail with lid, for future disposal.
- Rags soiled with liquid resin and hardener should be treated as hazardous waste and placed in a dedicated container. Dispose of in accordance with all applicable regulations.
- Resin that has dripped on plastic sheeting can be left to cure, and then easily removed with a putty knife. Cured resin may have sharp edges; use caution when handling these pieces.

Mixing Instructions

The most common causes of curing issues are inaccurate measuring and improper mixing. This product must be used at the correct mix ratio and mixed thoroughly according to the instructions below.

1. Always make sure that you use a clean, dry container for mixing. If using the volume ratio for mixing (2:1), ensure your containers have volume markings. If using the weight ratio for mixing (2.5:1), ensure you have a scale for measuring weight. Deviation from the mix ratio can result in incomplete cure and lower hardness of the final product.
2. Combine part A and part B and mix thoroughly for 4-5 minutes. The mixture will initially appear cloudy and visible streaks will be present. Continue mixing until the resin is clear and all streaks have disappeared. Avoid aggressive mixing as this can introduce more air bubbles into the epoxy.
3. After part A and part B are fully mixed, metallic or liquid pigments can be added as desired. Mix for 2-3 minutes until evenly dispersed.

For metallic pigments, use the following guidelines for 25mm (1") thick castings to achieve your desired look:

- Opaque = 2 grams (1 tsp) per liter
- Translucent = 1 gram (1/2 tsp) per liter
- Transparent = 1/4 gram (1/8 tsp) per liter

For thinner castings, more pigment per liter may be required to achieve the desired look.

Liquid pigments are highly concentrated. Add one drop at a time until the desired opacity is achieved. It is not recommended to add more than 3% of the total resin volume or approximately 4% of the total resin weight.

Note: During mixing, periodically scrape the bottom and sides of the container, as well as the stir stick, to ensure resin is fully mixed. **Do not** scrape the sides or bottom of the container during pouring. Unmixed resin in your pour can result in wet or sticky areas that might never cure.

TIP: Before starting your project, we recommend that you mix a small batch of epoxy so that you can get a feel for how it mixes and its working time.

Application Notes

FlowCast SPR can be poured to a depth of 6-25mm (1/4-1") per layer. For projects with wood, be prepared to add more epoxy as needed. The resin level may drop as it fills cracks and voids.

While curing, your pour should be kept in a dust-free environment or covered to prevent contamination of the surface.

Projects poured to 25mm (1") should be ready to finish in under 24 hours when working under ideal conditions. Thinner castings will require more time before they are ready to finish. Other factors such as resin volume, casting geometry, ambient conditions, and mold materials will affect the time to finishing and other processing characteristics.

TIP: Before beginning finishing steps, test a small area of your project to be sure that the epoxy is sufficiently cured. Working with castings that are too soft will gum up sandpaper and tools. During finishing operations, wear proper PPE and avoid dust.

FAQ

I am an experienced FlowCast® user. What do I need to keep in mind when using FlowCast SPR?

FlowCast SPR provides the same beautiful results as FlowCast with two key differences:

- At the start of mixing, FlowCast SPR will feel slightly thicker and will be more difficult to mix. However, once mixed, FlowCast SPR will feel like FlowCast.
- FlowCast SPR reacts faster than FlowCast and can reach higher temperatures while curing given the same casting size. This means you can create smaller volume or thinner profile projects that cure faster. However, this also means that FlowCast SPR is not suitable for larger pours.

Can I do multi-layer pours?

Yes, FlowCast SPR is suitable for multi-layer pours. Additional layers should be poured when the previous layer has reached set to touch. To prepare the epoxy surface for the next pour, scuff the surface with 220 grit sandpaper. Remove excess dust and debris, then wipe clean with denatured or isopropyl alcohol. You can then pour the next layer.

Can I pour thicker than 25mm (1")?

If you are planning to pour thicker than 25mm (1") and/or at a volume greater than 2L, pouring in multiple layers is suggested to prevent overheating. Alternatively, you can actively cool a thicker pour with fans, but you must be prepared to constantly monitor the temperature to make sure that your project does not overheat. Note that results will vary depending on ambient temperature. When mixed in large quantities, this product can generate significant heat. Handle with care.

Do I need a seal coat? What product do you recommend?

We recommend seal coating any surfaces that will be submerged in FlowCast SPR. Seal coats help prevent air and moisture migrating out of submerged materials, which can cause bubbles. UVPoxy is the preferred system for seal coats as it is a faster curing resin made for applying in thin layers. FlowCast SPR can also be used but will not get to the tacky state as quickly.

How do I minimize air bubbles?

Entrapped air is usually caused by aggressive mixing of the resin or can be introduced when encapsulating porous objects. To minimize bubbles, use the following practices:

- Do not mix aggressively. Mix slowly until the epoxy is streak free and clear.
- If including wood or other porous items, seal coat them before encapsulation.
- Objects can be painted with resin before adding them to the mold. This breaks the surface tension and can reduce bubbles.
- Pour slowly around encapsulated objects to avoid pockets of trapped air.

Monitor the resin for bubbles after pouring, checking periodically during the working time. If bubbles do appear, wait for them to come to the surface, then use the following methods to release the air:

- Use a torch to heat and release bubbles. Hold the flame tip 25-50mm (1-2") above the surface. Do not allow the flame from the torch to touch the epoxy. A heat gun can also be used but take care to not to disturb the surface of the resin.
- Use a toothpick or other pointed tool to release the air bubble.

What is the shelf life of the product?

FlowCast SPR is good for 2 years in an unopened container. Once opened, FlowCast SPR part A and part B should be used within 3 months.

Will my project yellow over time?

All epoxies yellow over time. To combat this, we formulated FlowCast SPR with UV stabilizers. These additives absorb UV light and prevent damage to the resin. Eventually, the stabilizers will lose their effectiveness. Adding metallic or liquid pigments to FlowCast SPR will help it resist yellowing better than if it is left transparent. Completed projects should not be kept outdoors.

Is this product food safe?

FlowCast SPR is not FDA compliant for direct contact with food.