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HOW TO USE EPOXY RESIN?

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How to use the inclusion resin with a support ?

Find out everything you need to know about epoxy resin in this article so you can get started on your first resin creation. We're going to focus on casting epoxy here, but the approach is the same with glazing epoxy. If you want to learn more about the different resins and choose the one you should use for your project, go to our How to choose your resin fact sheet.

1. What is Epoxy Resin?

Epoxy resin is a liquid thermosetting polymer. In order for it to cure, two liquids must be mixed together. One containing the resin and the other, a hardener. A chemical reaction then takes place. The resin will heat up and harden. It is said that the resin catalyzes. The quantities are generally 2 doses of resin for 1 dose of hardener, but check the instructions of your product before.
If there is not enough or too much hardener, the resin will remain soft. It is therefore important to respect the recommended quantities. Most of the time, these quantities are measured in milliliters (ml) with a small graduated container provided for this purpose.

2. Under what conditions should I make resin?

• Resin does not catalyze well at low temperatures. The higher the temperature of the room, the faster the resin will cure. We recommend that you do not make resin below 15°C. Ideally, practice between 20-25°C and store your resin between 15-30°C, out of direct sunlight.
• You must be in a dry location and on a dry surface. Moisture can slow down the curing of the resin and cause some areas to become opaque.
• Protect your work surface, as resin is difficult to clean. You can use our silicone mats for modeling for example. We recommend that you place this mat on a rigid tray to easily transport your creation in progress. This will also allow you to tap the mold to bring up the bubbles.
• Ventilate the room or, better yet, wear a gas and natural gas filter mask. These are the same masks used for painting in the building. The use of this mask is even more important if you regularly or semi-professionally create resin accessories.
• Wear protective gloves, as liquid resin is irritating to the skin. Also protect your eyes with goggles and avoid rubbing your eyes after touching the resin.

3. How to mix the resin?

In most resin packages, you will have two small graduated containers. We'll put the resin in one, and the hardener in the other. Then mix the two liquids in the recommended doses in a disposable cardboard cup or in another special resin container that you will have bought separately and that you can clean. Be careful not to use plastic cups, as there could be a chemical reaction and it could melt. Also, mix with a wooden spatula like a popsicle stick. Do not use containers and utensils that can be reused for food!
1.
Mix the mixture gently but evenly so that the two liquids are perfectly blended. If you mix too fast, you will create more bubbles.
2.
You can then add the coloring. Please refer to our data sheet on the subject to choose the appropriate colorant for your resin.
3.
Some brands advise you to let the resin sit in the cup for 15 minutes to allow the bubbles to rise. Then gently pour the resin into the mold or into your hollow support. Bring up the bubbles by gently tapping the tray on the table. You can also tap the mold with your finger.
4.
Once the bubbles have risen to the surface, pass the flame of a lighter or gas lighter over the bubbles to make them explode. Another more professional but more expensive technique is to put your mold in a vacuum chamber. This is a kind of pot in which a mechanism will extract the air. The air trapped in the resin will escape and there will be no more bubbles. This can be an interesting investment for professional use.
5.
Let the resin cure for 48 hours in the shade (the darker the better) and away from dust, always in a dry room. You can make a tester to check that your resin is hard without damaging your creation: Pour some resin into a disposable cup or an extra mold. This way you can touch it with a spatula and see if the resin feels hard or soft.
6.
Even when hard to the touch, the resin is still working. It is not yet stabilized. Wait 15 days before putting anything on it or exposing it to sunlight. In any case, if you want to slow down the yellowing of your creation as much as possible, do not expose it to the sun. Modern epoxy resins are much more resistant to yellowing than they used to be, but it can still happen after several years or prolonged exposure to sunlight.


4. How to sand and polish a resin?

This is a very complicated step that is best avoided, especially without an electric sander and polisher. It is usually easier to re-cast a thin layer of resin to rectify imperfections. For example, resin tends to shrink and form a slight indentation in a mold. Re-cast resin to rectify this problem and avoid having to cut the edges with a scalpel and then sand. Other than this problem, you will rarely need to cut and sand the resin when using a hollow mold or substrate.
If you still want to cut off the excess edge with a cutter and sand, here is what we recommend: Do not sand until the resin has fully cured after 15 days. Sand with water. Get a basin and waterproof sandpaper. Start sanding with 120 grit in a circular motion. Gradually decrease the grit of the sanding paper to 3000 grit. For polishing, prefer a polisher with a flannel tip, but it is still possible to do it by hand. You can use a polishing paste. Generally those suitable for wood are also suitable for resin.

5. How do I remove epoxy resin?

Resin can be cleaned before it hardens with rubbing alcohol or acetone and a paper towel. The resin once hardened is very difficult to remove from a porous surface, if not impossible, so it is important to protect your work surface.

Result