

## Insect preservation in resin

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Resin art is a versatile and creative medium that allows you to create stunning pieces using epoxy resin, which can be poured into molds or used on various surfaces. Resin art involves using a two-part epoxy resin system, which consists of resin and a hardener. When mixed, these components undergo a chemical reaction which results in a durable, plastic-like material. This medium is used to create a wide range of artistic décor items including jewellery, keychains, photo frames, coaster, wall art and even furniture. With the growing trend of decorating homes and offices with aesthetic artefacts, resin art has already found its prominent place as it immediately provides that “wow factor”. Resin art has become popular among beginners because it offers achievable results with endless creative freedom. Unlike many crafts that require years to master, resin art provides desired results relatively quickly, making it perfect for those seeking immediate gratification in their creative pursuits. As a beginner, we can create beautiful and functional items like glossy coasters that protect furniture in style, personalized keychains that make perfect gifts, simple jewellery pieces and decorative magnets that brighten any space. Once you understand the basics of epoxy resin, the possibilities are endless.

### What is Epoxy Resin?

At its core, epoxy resin is a two-component system that creates magic through chemistry. Part A is the resin itself which is a thick, honey-like liquid that contains the polymer base. Part B is the hardener (also called catalyst) which is the component that triggers the chemical reaction. When you combine these two parts in the correct ratio, they undergo an exothermic reaction generating heat and transform from a liquid into a durable, crystal-clear solid. This transformation is a molecular-level change where the components cross-link to create a robust, glossy material. The beauty of this process is that once fully cured, the resin becomes waterproof, heat-resistant to a degree and maintains its brilliant shine for years.

### Key Resin Terminology:

- **Curing:** It is the hardening process where liquid resin transforms into solid plastic. It is a chemical reaction that continues even after the resin feels solid to the touch.
- **Working Time (Pot Life):** Once Parts A and B are mixed, you can work with the resin before it thickens and becomes unusable. This timeframe typically ranges from 20 to 45 minutes, depending on the resin type and temperature.



- **Viscosity:** It refers to how thick or thin your resin flows. Low-viscosity resin is thinner and flows easily (great for coating), while high-viscosity resin is thicker better for doming or controlled applications.
- **Demolding:** It is the satisfying moment when you remove your fully cured resin piece from its mold. Timing is crucial—too early, and it might bend or stick; too late isn't harmful but can make removal more difficult.

### Types of resin for art:

There are two types of resins – coating and casting resin. Understanding the difference between coating and casting resins is crucial for beginner resin crafts success.

Coating resins are designed for thin layers (typically up to 1/8 inch per pour). They cure quickly, self-level beautifully, and are perfect for covering surfaces like artwork or tabletops or creating a protective layer over photos. They usually have a 1:1 mixing ratio, making them beginner-friendly. However, casting resins are formulated for deeper pours (1/4 inch to several inches). They cure more slowly to prevent overheating and cracking in thick applications. These are ideal for molds, river tables, or embedding objects. Their mixing ratios can vary (often 2:1 or 3:1). For most resin projects, a good-quality “Art Resin” or general-purpose epoxy resin that can handle both shallow coating and moderate depth casting should be selected.

### Risks of Resin and necessary safety gear:

While liquid resin components can be irritants and sensitizers, understanding and respecting these materials ensures a safe crafting experience. Uncured liquid resin and hardener can cause skin irritation, allergic reactions, and respiratory issues if handled carelessly. During mixing and curing, resins emit volatile organic compounds (VOCs).



However, once fully cured, resin is generally considered non-toxic and inert, similar to hard plastic. The key is to treat the liquid resin with proper precautions. These are some of the protective shields which must be compulsorily used while doing resin art:

- **Nitrile Gloves:** These are crucial and non-negotiable safety gears. Nitrile offers superior chemical resistance to latex, which can degrade when exposed to resin.
- **Respirator:** An organic vapor respirator protects you from fumes, especially when working indoors or for extended periods.
- **Safety Glasses/Goggles:** Resin can splash unexpectedly when pouring or mixing. So be sure to protect your eyes with proper safety glasses.
- **Protective Clothing:** Wear an apron or designate “resin clothes” that you don’t mind potentially ruining. Long sleeves protect your arms from splashes.

Ventilation is one more important factor in minimising the risks of working with resin. Resins benefit from good airflow. Open windows on opposite sides of your room for cross-ventilation, use fans to circulate air and consider working with the door open. Poor ventilation can lead to headaches, dizziness, or respiratory irritation—symptoms that proper airflow completely prevents. In case if resin contacts your skin immediately wash the affected area with soap and warm water. Use an exfoliant cleanser or pumice-based hand cleaner for stubborn resin. Pat dry the affected area and apply a gentle moisturizer. However, never use solvents like alcohol, vinegar, or acetone on your skin as these can increase the absorption of resin components through skin, worsening the situation.

The origin of the use of resins as preservatives is almost as elusive as are those components in resin which are responsible for their conservative qualities. There are two major attributes to resin which contribute to its preservative

nature: the first consists of antibiotic qualities which retard or destroy bacteria and fungi; the second includes the ability if resin itself to preserve the tissue of embalmed organisms. Epoxy resins have been extensively employed in cultural heritage conservation as both adhesive and reinforcement materials owing to their exceptional bonding strength, relatively low toxicity, and cost-effectiveness.

### Preservation of insects in resin:

Dry preservation technique is essential for resin projects featuring insect specimens. It is essential to thoroughly dry the insects before resin preservation to maintain shape and prevent moisture issues. Clean the specimen gently with a soft paintbrush to remove dirt, then place it on paper towels on a flat surface to dry in a well-ventilated area. After soaking insects in alcohol to sanitize them, allow ample drying time ideally overnight to avoid future mold and deterioration.

When preparing to pour resin, calculate the amount



needed and the corresponding drops of catalyst according to the provided ratio. Pour a thin layer of mixed resin into the silicone mold and carefully position the insect face down, pushing it slightly to secure it. Cover the mold to prevent dust contamination and wait until the resin becomes tacky approximately 40 minutes before adding more resin as needed. For optimal results, consider using silica gel for moisture control while storing specimens. Insects may be treated with ethanol (70-80% alcohol) for sanitization. Careful drying and proper mixing of resin will help produce successful casts while ensuring the specimen remains preserved and visually appealing.

The beauty of resin art for beginners lies in the stunning results and the journey itself. Each pour teaches something new like how colours interact, how temperature affects work, or the meditative joy of watching resin self-level into glossy perfection. Embrace the learning process,

including the inevitable imperfect pieces—they're stepping stones to mastery. As you embark on your resin art adventure, remember that safety and patience are your best friends.

Protect yourself adequately, measure accurately, and allow complete curing.

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