

When epoxy resin appears milky or has a cloudy appearance after curing, it can be due to several factors:

- 1. Moisture or humidity:** Epoxy resin is sensitive to moisture, and exposure to high humidity or moisture during the curing process can cause the resin to turn milky or cloudy. Moisture can react with the epoxy components and interfere with the curing reaction, resulting in a hazy appearance.
- 2. Improper mixing:** Inadequate or incomplete mixing of the epoxy resin and hardener can result in uneven dispersion of the components, leading to a milky or cloudy appearance. It's crucial to thoroughly mix the resin and hardener, scraping the sides and bottom of the mixing container, to achieve a homogeneous mixture.
- 3. Cold temperature:** Curing epoxy resin in cold temperatures can slow down the curing reaction and contribute to a milky or cloudy appearance. Cold temperatures can inhibit proper cross-linking and result in incomplete curing.
- 4. Moisture contamination during application:** If the surface or materials being coated with epoxy resin contain moisture, it can lead to a milky appearance. Moisture trapped in the substrate can be released during the curing process and cause cloudiness in the resin.
- 5. Air bubbles:** Air bubbles trapped within the epoxy resin can scatter light and give a milky or cloudy appearance. Bubbles can form during the mixing or pouring process and may not escape naturally. Proper techniques like degassing or using a heat gun can help remove or reduce the presence of bubbles.
- 6. Incompatible additives or pigments:** Adding certain additives or pigments to epoxy resin without proper compatibility can cause cloudiness or a milky appearance. Some additives or pigments may not fully disperse or react with the resin, leading to an inconsistent appearance.

To avoid a milky appearance in epoxy resin, it's important to work in a controlled environment with low humidity, ensure proper mixing and application techniques, and avoid moisture contamination. Additionally, allowing the resin to acclimate to room temperature before use and using compatible additives or pigments can help achieve a clear and transparent finish.