

RESIN VS ACRYLIC: WHAT ARE THE DIFFERENCES?

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Resin and acrylic are material names often found in jewelry. Technically, acrylic, whose scientific name is polymethyl methacrylate (PMMA), is a thermoplastic resin. On the other hand, the two-component epoxy resin used in DIY to make pendants and accessories using molds is a thermosetting resin. However, we won't be discussing DIY epoxy resins here, as their properties are very different from those of industrial resins. There are also pendants and beads made from industrially-produced thermosetting resin.

What are the differences between thermoplastic and thermosetting resins?

Characteristics	Thermoplastic resin (Acrylic)	Thermosetting resin
Material	These resins require no hardener to solidify. They are initially in solid form (granules or powder), then heated to melt, molded and cooled to solidify.	They consist of two elements (resin and hardener) which react chemically together. This process is irreversible, transforming the liquid resin into a solid, rigid structure.
Texture	They are generally more flexible and can soften under high temperatures, making them less rigid than thermosets.	They are very rigid, resistant to high temperatures and more stable over time.
Impact resistance	Yes, but more sensitive to scratches than resin.	Yes, resin is more impact-resistant than acrylic.
UV resistance	Depends on additives used.	Depends on additives used.
Manufacturing process	By injection molding or machining	By injection molding or vacuum casting
Weight	Light	Light
Jewelry components and jewelry findings	Large links. Flower petals. Pearls. Earrings. Pendants. Cabochons. Chains. Lobster clasps Oval spacers. Cameos.	Pearls. Cabochons. Earrings. Pendants. Rope bracelets. Half-round spacers. Dog charms. Rings.

What is resin?

There are several types of resin:

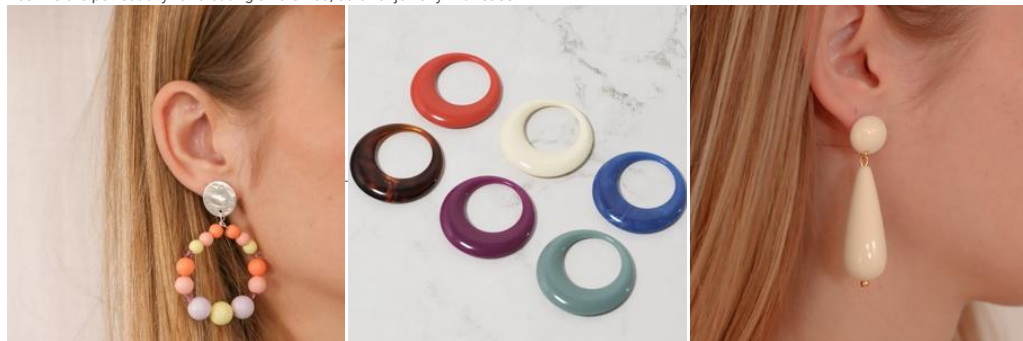
- Natural resin: this is the substance that trees secrete to heal their wounds when they have been attacked or injured. Some plant resins can fossilize and become amber.
- Synthetic resin: This refers to a liquid or solid polymer product, which is a base material for manufacturing plastics, paints, adhesives and varnishes, for example. It can be thermoplastic or thermosetting. The best-known is epoxy resin, but acrylic is also a resin, as are many other materials.

In jewelry, it is used to make beads, pendants, cabochons, bracelets, rings... Jewelry components are manufactured by molding, injection or vacuum casting. Resin components are lightweight and have a smooth, glossy finish. They are available in a wide range of colors and shapes.

Resin is a strong, hard material with a certain flexibility, making it highly resistant to cracking and bending, withstanding cracks and impacts.

Resin jewelry components can be transparent or opaque. Manufacturers can include glitter and marbling.

Resin is the perfect ally for creating diversified, colorful jewelry with ease.



What is acrylic?

Acrylic is a thermoplastic (PMMA: polymethyl methacrylate) used in the manufacture of paint, road signs, illuminated signs, decorative objects... In the jewelry world, it is used to make pendants, beads, links, cabochons...

Light and comfortable to wear, it is durable and resistant to daily wear and tear. It can be used to make jewelry that can be worn all day long, even if it's a large piece. Acrylic is scratch-, shock- and break-resistant. What's more, acrylic jewelry components, such as acrylic beads, are easy to clean.

Acrylic is a transparent or opaque material with a hard, smooth texture. It is easily shaped by molding or machining, enabling manufacturers to create jewelry components with complex shapes. It is available in a wide variety of colors and finishes.



Result