

# Know your glue to avoid a sticky situation

by **Linda Hartung**

Making jewelry often requires the use of glue. With so many choices, it is important to understand the qualities and long-term effects of the glue you use, to ensure satisfactory results. Some glues offer instantaneous bonding powers, only to shrink and become brittle over time. Epoxy and G-S Hypo Cement, on the other hand, are leaders in the jewelry industry, offering different advantages for different pieces. Knowing the qualities of these two glues can help you choose the best one for your project.

## Use epoxy for a solid hold

If you've avoided epoxy because it requires mixing and has an odor, you are missing out on one of the strongest, most enduring glues available. Epoxy is the primary glue used in jewelry-manufacturing processes, such as setting crystals and gluing magnets into clasps, and is the only glue recommended by Swarovski for these purposes. Setting crystals with epoxy is not difficult, and, with a little practice, the novice can quickly achieve professional results.



Use toothpicks and adhesive putty for setting crystals with epoxy.

Epoxy bonds with many substrates, including metals, glass, ceramics, concrete, and wood. To ensure a good bond, the surface must be clean and dry, and a slick or smooth surface should be roughed up slightly with an emery board or file.

Epoxy also helps your jewelry brave the elements — high altitudes and cold conditions during travel or shipping, perspiration, water, solvent cleaners, or accidental impacts. Epoxy is strong, dries clear, won't shrink, is waterproof and solvent resistant, and has good impact strength. Because of these qualities, I recommend epoxy for all crystal setting and whenever you need a permanent bond.

## Choosing the dry time and strength

Epoxyes are differentiated by dry time, with Devcon's 5 Minute Epoxy and 2-Ton (30-minute) Epoxy being some of the most readily available. The minutes refer to the time it takes to set. Five-minute epoxy gives you about three minutes of working time (be prepared — three minutes go fast!), and 30-minute epoxy gives you about 15 minutes.

Curing takes one to two hours. The longer the dry time, the stronger the bond and, typically, the less potent the smell. So, if you can wait 30 minutes, you'll increase the strength of your bond with less stink.

Epoxy strength is measured in pounds per square inch (PSI). Five-minute epoxy typically provides 1,500 PSI, and 30-minute epoxy offers 2,500 PSI. Either of these strengths will exceed most jewelry and crafting needs, especially setting magnetic clasps.

In my own clasps, I use extremely strong magnets (2 lb. static test strength). For these, you must use epoxy to keep the magnets from pulling each other out of the clasp halves.



Epoxy holds even strong magnets in their clasp halves.

## Mixing, applying, and removing epoxy

Epoxy is composed of two parts — a resin and a hardener — that must be mixed together to activate the bond. In cases where an epoxy bond fails, it is most likely the result of not dispensing the two parts equally or not mixing them together thoroughly. If you do large-scale gluing, you can buy special equipment that dispenses epoxy and keeps the odor to a minimum. For occasional use of epoxy, ventilation is vital. Consider buying a desktop air purifier and position it nearby, or, if possible, glue outdoors.

Mix epoxy on a small sticky notepad using a wooden toothpick. Notice that when you mix the epoxy, it goes through several stages before it is ready to use. First it turns slightly cloudy, and then tiny bubbles emerge, which will quickly go away.

Apply the epoxy with a second toothpick. To set a crystal or stone, cover one end of a third toothpick with adhesive putty (used for hanging posters) and touch the putty to the crystal or stone. The putty will hold the crystal and allow you to position and place it in the epoxy.

When finished, simply fold the sticky note over the glue and used toothpicks, peel off the note, and throw it away.



G-S Hypo Cement's pinpoint tip makes it ideal for gluing crystals along WireLace.



Epoxy is necessary to secure crystals on the end of WireLace.

You'll have a fresh surface to mix on the next time.

To remove epoxy before it is dry, use rubbing alcohol (my preference because it also disinfects), acetone, or nail polish remover. To dissolve epoxy after it is cured, you must use a special glue-dissolving compound called Attack.

## Use G-S Hypo Cement for flexibility

Unlike epoxy, which becomes hard and rigid with a strong bond, G-S Hypo Cement stays soft and flexible with a medium bond. Invented in 1939 for watchmaking and jewelry repair, G-S Hypo Cement requires no mixing and is easy to apply with its pinpoint tip. It dries clear, is waterproof, and has only a slight odor, which dissipates quickly.

G-S Hypo Cement can be used on many substrates, including beads, plastic, glass, metals, painted or finished wood, and other nonporous surfaces. After applying, allow it to become tacky (about 10 seconds) to begin assembly. G-S Hypo Cement dries in about an hour, with a full cure in 24 hours.

## Choose glue based on your project

It is important to look at the wear and use of your design before choosing a glue. For instance, I use G-S Hypo Cement to coat knots on elastic cord

because the glue remains soft and pliable.

I also use G-S Hypo Cement on 1 mm WireLace mesh ribbon to gently hold crystals in place. For these projects, I only need a medium hold and I want to keep the WireLace flexible, plus the pinpoint nozzle makes application fast and easy. Should a crystal become loose (which takes some effort), it will simply move on the WireLace, and the jewelry can still be worn.

However, when I want to glue a crystal on the end of a piece of 1 mm WireLace, I use epoxy. Here, I want a strong, permanent bond to make certain the crystal won't become loose or pull off.

## Don't settle for less

Avoid the temptation to use instant superglues that contain cyanoacrylate just because they are fast and easy, or because the packaging says they can be used on jewelry. While it's true that superglue will bond to just about anything, setting crystals with it can be a disaster. Over time, superglue will shrink and become brittle, causing crystals to separate from their findings or foil backing. Simply wearing the item or dropping it on a hard surface may be all it takes for the crystal to pop out. ●



Linda Hartung and husband Tim Hartung are co-owners, designers, and innovators of Alacarte Clasps and WireLace. Linda has taught

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## WHERE TO BUY

You'll find epoxy at most hardware stores, and G-S Hypo Cement at craft, hobby, and bead stores. For more information, visit these Web sites: For Devcon epoxyes: itwconsumer.com For G-S Hypo Cement: gssupplies.com