

AeroMarine Products, Inc. 9020 Kenamar Drive #206 San Diego, CA 92121 (877) 342-8860 www.aeromarineproducts.com info@aeromarineproducts.com

# AeroMarine 1150 Epoxy

AeroMarine 1150 Epoxy is a high performance gray epoxy adhesive, excellent for repairing concrete and filling cement cracks. Our 1150 Epoxy is also used in the manufacture and repair of aircraft, boats, sporting goods, and industrial products. It bonds wood, metals, fiberglass, and most hard plastics.

#### \*\*It is not recommended for use on polyethylene, polypropylene, Tedlar, anodized aluminum, EPDM or Teflon.

Features:

Long work life Room temperature cure Low viscosity Simple, noncritical 1-1 mix ratio

Specifications:

Mixed Unfilled Viscosity: 3000cps maximum Color: Gray Work life: 45-60 minutes@70F Cure time: 24 hours@70F Shear strength: 2500psi Tensile Strength 8000 psi Flexural strength: 12,800psi Modulus of elasticity: 5.7 x 10<sup>6</sup>

Directions for use:

Unfilled: Mix the resin and hardener in equal parts by volume. AeroMarine 1150 Epoxy begins to gel in about 45-60 minutes, depending on the size of the batch and the temperature.

Filled: Measure out equal amounts of resin and hardener. Measure out up to twice as much aerosil filler as the total resin mixture. Mix the aerosil filler into the resin, stirring until all the filler is incorporated into the resin. Add the hardener and stir for approximately 2-3 minutes until the mixture is even looking. NOTE: You must shake the container of gray resin vigorously for 60 seconds before mixing it with the hardener in order to maintain color dispersion. Also, you must shake or turn the container of gray resin weekly to keep the color from settling.

Apply to clean, dry, non-oily surfaces. Cleaning with acetone, isoprophyl alcohol, or lacquer thinner is recommended. Sanding or abrading surfaces generally increases bond strength.

\*\*If applying 1150 epoxy for concrete repair, you must first clean the area thoroughly by vigorous sweeping or using "air in a can" before applying 1150 epoxy.\*\*



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# Best practices when using epoxy resin

**Never mix less than about 4 ounces of resin hardener.** When manufacturers design and test their resins, they normally write the specifications for 100 gram batches, which is about 3 ounces. There are two bad things that can happen when mixing a smaller batch. If the sample is too small, it is much more difficult to get the mix ratio correct. These mixtures are exothermic, meaning that they generate heat in order to cure. A tiny batch does not generate enough heat to cure the resin properly.

**Do not mix the entire amount of resin and hardener together at once.** The larger the batch, the more exotherm or heat is generated in the cure cycle. Thickness of the pour also affects the exotherm and cure speed. 3/8" is about the maximum thickness to pour at one time for most epoxies.

**Don't vary the mix ratio**. Varying the mix ratio usually results in a mess. Too much hardener will cause the epoxy to turn to rubber. Too much resin will result in uncured sticky patches.

**Do NOT add more hardener in order to speed up the cure time**. More hardener ruins the mix ratio and makes the resin cure to rubber and stay that way! Use either a heat gun (NOT a blow dryer) or a floor heater to hasten the cure time.

### Mix and pour everything twice.

#### Mix in plastic containers.

**Avoid mixing with drill motors**. Drill motors don't get into every corner of the mixing container. Drills spin too fast, they can generate friction in the resin causing it to exotherm out of control resulting in premature curing. Powered mixing can generate a lot of air bubbles which will result in a lot of extra work in the end.

# FOR INDUSTRIAL OR PROFESSIONAL USE ONLY

**Storage-** <u>Epoxy resins tend to freeze even at fairly high temperatures, 70F.</u> If allowed to freeze, "epoxy ice" can form in the container. It usually looks like swirls of white stuff suspended in the resin. It can be reconstituted by warming at 120F for a couple of hours. Using frozen epoxy can cause areas of uncured epoxy as the "epoxy ice" will defrost in the heat generated by the exotherm.

**Spraying-** Do NOT Spray! Our epoxies are not made for spray applications.

**Clean-up-** We use aerosol carburetor cleaner to clean up spills and messes. We suggest using acetone, toluene, xylene, and lacquer thinner. *Avoid regular paint thinner (mineral spirits)*. To clean hands, use a pumice hand cleaner available in often automotive supply stores.

**Thinning**- *Thinning* is not recommended for most applications. There are very few exceptions. The most acceptable use of a thinner is using epoxy to penetrate wood. In this case, no more than 10% is a good amount of thinner to use. Remember, thinners are flammable, so spread the epoxy promptly after thinning to keep the exothermic heat from building up. Use the same thinners listed in the Clean-up section above.



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**Test-** Always make a test to determine the feasibility of your process. There are many unforeseen factors that can affect the outcome of your project. Running a controlled test may be inconvenient, but it can make the "Learning Curve" of processing these products much easier.

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