



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

www.aeromarineproducts.com
info@aeromarineproducts.com

AeroMarine Cycloaliphatic “Non Blushing” Clear Epoxy #300/21

AeroMarine Products 300/21 epoxy resin is a clear, low viscosity cycloaliphatic epoxy system is primarily used for laminating, coating, and casting small objects. It contains no VOCs and is relatively moisture insensitive.

*Epoxy is NOT UV resistant—it yellows in sunlight. **

IMPORTANT: You must use the “Double Mix and Pour Method” with our 300/21 epoxy resin before applying it. See detailed instructions below. **NEVER mix the entire quantity of resin and hardener together at once! It will cure in your mixing container.**

****IF USING THE COLORED VERSION, YOU MUST TURN THE CONTAINER UPSIDE DOWN EVERY 7 DAYS TO MAINTAIN COLOR DISPERSION. SHAKE THE COLORED RESIN VIGOROUSLY FOR 2 MINUTES BEFORE USING!****

300/21 epoxy resin stops curing at temperatures below 50F. If you bring the temperature above 50F, it will begin curing again.

Seven advantages of our 300/21 epoxy resin, a cycloaliphatic epoxy vs. conventional epoxy are:

- Resistance to amine blush
- Excellent penetrating characteristic
- Bonds well, strong and durable
- Excellent gloss and clarity
- Excellent chemical resistance
- Self-leveling
- Less sanding between coats

Uses include:

- Laminating boats and aircraft using fiberglass, carbon fiber, or Kevlar cloth
- Casting small objects
- Building “stitch and glue” boats
- Potting electronic assemblies
- Potting specimens for measurement
- Coating wood and concrete
- Bonding wood, metal, concrete, and most plastics
- Flooring
- Pouring countertops, tabletops and bar tops

Specifications:

Mix Ratio:	2 parts Resin to 1 part Hardener by volume or weight
Mixed viscosity:	600cps
Color:	Clear
Work life:	30 minutes@70F (using at least 8 oz. resin and 4 oz. hardener)
Cure time:	24 hours@70F (using at least 8 oz. resin and 4 oz. hardener)
Shore D Hardness	80-85
Shear strength:	2500 psi
Tensile Strength	10,500 psi
Flexural strength:	17,500 psi
Modulus of elasticity:	5.7 x 10 ⁶ psi

FOR INDUSTRIAL OR PROFESSIONAL USE ONLY



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

www.aeromarineproducts.com
info@aeromarineproducts.com

Directions for use:

Double Mix and Pour Method: Mix 2 parts AeroMarine 300 Resin to 1 part AeroMarine 21 Hardener. Mix the two components together in a plastic container for 2 minutes, then transfer the mixture to another plastic container and mix them again for another 2 minutes. The theory is that the liquids clinging to the sides and bottom of the containers don't get mixed well. By transferring the mixture to another container, you are assured that everything is well mixed.

NEVER mix less than 4 ounces of resin and 2 ounces of hardener together—it will NOT cure! Also, this smaller quantity of mixed resin and hardener may take up to 4 times as long to cure (i.e. 96 hours instead of 24 hours to cure).

To avoid excess exotherm, mix small batches until you are familiar with using this material. If laminating with cloth, it is best to apply subsequent layers within 18 hours of each other.

Best practices when using epoxy resin

Never mix less than about 4 ounces of resin and 2 ounces of 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. Because the sample is small, it is much more difficult to get the mix ratio correct. Also, 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. If casting a large part, mix smaller batches to make the process more manageable. Thickness of the pour also affects the exotherm and cure speed. 3/8" is about the maximum thickness to pour most epoxies.

Don't vary the mix ratio. Old style polyester resins were catalyzed with a chemical called MEKp. You could vary the mix ratio to get different reaction speeds. Modern epoxies, polyurethanes, and silicones are different. They don't use a true "catalyst", but have a different kind of reaction method. Varying the mix ratio usually results in a mess.

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. Please see Double Mix and Pour instructions above.

Mix in plastic containers. Paper cups contain moisture which may adversely affect the resin. Avoid waxed paper cups also.

Avoid mixing with drill motors. Drill motors don't get into every corner of the mixing container. Also, if they spin too fast, they can generate friction in the resin causing it to exotherm out of control resulting in premature curing. Powered mixing also can generate a lot of air bubbles.



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

www.aeromarineproducts.com
info@aeromarineproducts.com

Applying multiple coats. You can apply multiple coats of 300/21 epoxy if you wait about 12 hours (at 70F) between coats. See Priming Wood for Bartop or Tabletop Coating for more information.

FOR INDUSTRIAL OR PROFESSIONAL USE ONLY

Storage- Epoxy hardeners usually last forever. Epoxy resins, however, tend to freeze even at fairly high temperatures, 50F. 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. Or, you can use the “non-ice” part of the epoxy.

Polishing -You can buff out the AeroMarine 300/21 epoxy once it has cured for 7 days. You have 2 options for buffing/polishing the cured epoxy. 1. Use 2000 grit sandpaper (from an auto supply shop) and wet sand the epoxy. Or 2. You can wet sand the 300/21 epoxy and then use Novus polish (from places like Home Depot and/or The Container Store).

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. Otherwise just about any solvent will work, including acetone, MEK, toluene, xylene, and lacquer thinner. *Avoid regular paint thinner (mineral spirits).* To clean hands, use “Fast Orange” hand cleaner available in 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, about 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.

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.

Priming Wood for Bartop or Tabletop Coating- There are many good reasons to apply a prime coat of epoxy to your wood before the flood coat. The primary reason is to seal the wood to prevent bubbles in the flood coat. If the wood is old or distressed, has voids in the grain, is laminated like butcher block, or if the edge treatment has a seam with a paper thin gap, then the epoxy will find those openings and slowly seep into them. The result is that after you remove all the bubbles with the heat gun, new bubbles will slowly form. **Because there are so many types of wood in so many different conditions, we recommend always applying a prime coat first.** To apply a prime coat, mix the hardener and resin together and apply a thin coat to the raw wood with a brush or roller. If there are no large voids and you only need to seal the wood grain, then you can rub on the mixed epoxy with a cloth. The key is to apply a thin coat that does not have enough depth to create bubbles, but is thick enough to fill and seal any gaps. After this coat cures (usually overnight), you can then apply a flood coat with much higher confidence that the only bubbles you will have are bubbles that were introduced during mixing.

FOR INDUSTRIAL OR PROFESSIONAL USE ONLY



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

www.aeromarineproducts.com
info@aeromarineproducts.com

AeroMarine Products (seller) make no warranties, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. User is responsible for determining whether the seller's product is fit for a particular purpose and suitable for a user's particular method of application. Many factors can affect the use and performance of seller's product. Given the variety of factors that can affect the use and performance of seller's product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the seller's product to determine whether it is fit for a particular purpose and is suitable for the user's method of application.

If the seller's product is proven to be defective, THE EXCLUSIVE REMEDY, AT SELLER'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE PRODUCT. Seller shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.