Helpful Hints For Resins

- To extend working time, pour catalyzed resin directly onto the surface to be coated rather than holding the mixture in bulk.
- Select the appropriate epoxy system for your working temperature. Pot life is short above 80°F and a cure may be doubtful below 60°F.
- A test patch is recommended prior to *glassing* below 60°F.
- Temperature of the surface being coated is as critical as the surrounding air temperature.
- If chemical resistance is required, test before using on surface.
- Expect slower wet-out of fiberglass reinforcement when using epoxy. Epoxy is not recommended for use with fiberglass mat.
- Epoxy and polyester may be bulked-out, strengthened, or thickened to make a paste by the addition of TAP fillers. Dry and clean sand may be used to bulk-out epoxy for concrete floor repairs or for building leveling ramps.
- See Product Bulletin 13 for Gel Coat information.
- To minimize deterioration from weather elements and the sun, add pigment to the resin or paint the finished product. Adding too much pigment can cause an improper cure.
- Clean tools and equipment with acetone or Replacetone while resin is still in liquid stage.
- TAP Epoxy proportions are measured by volume not by weight.
- For more information: check our website **tapplastics.com**

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TAP Plastics

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PRODUCT BULLETIN 3
Why Fiberglass?

RESINS
POLYESTER • EPOXY

Use It To...

• Build • Strengthen • Repair • Convert
• Beautify • Waterproof • Protect • Adhere

Use It On...

• Cars • Boats • Industrial Surfaces
• Athletic Equipment
• Decorative Surfaces
• Ponds • Tanks • Tools
• Surfboards • Sailboards
• Structures • Appliances

Use It For...

• New Projects
• Saving Repairs
• Things You Can't Do Any Other Way

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Why Fiberglass?

The term fiberglass means, for our purposes, to combine man-made fibers and liquid resins to form tough, durable parts. The fibers can be made from glass, carbon, or aramid, which are woven in various forms to allow you to select the right fiber for your project.

Polyesters and epoxies offer a variety of physical properties to select from as well. The key to success is selecting the right combination of resin and fiber.

RESIN SELECTION

Polyester Resins

The majority of fiberglass projects are done with polyester. There are two reasons for this. One is that polyester is considerably more economical than epoxy. Second, and more importantly, polyester resin cure time can be controlled to match temperature conditions and user speed. By adjusting the amount of catalyst, the user can accurately control the resin working time and rate of cure.

Another advantage of polyester is that it does not fully cure at the surface, which allows successive layers to be added over time without having to sand between layers. If your project is going to extend over a day or so, polyester will eliminate surface preparation between layers. For a final surface cure , TAP Surface Curing Agent can be added to any of the polyester resins.

TAP carries four polyester resins. The proper resin for your project will depend on the final properties important to you. Below are brief descriptions. See our website, **tapplastics.com** or visit one of our stores for more technical information.

TAP Bond Coat Polyester Resin is a quality economical resin with a relatively long pot life (the length of time before the resin hardens in the cup). It is a good general-purpose resin that cures to a tacky finish for maximum adhesion between layers. It is a low viscosity, thixotropic resin, with a catalyst indicator dye. The blue resin turns neutral with the addition of catalyst.

TAP High Strength Isophthalic Resin is a low viscosity, thixotropic (ideal for vertical surfaces) resin that offers high strength, and excellent corrosion and chemical resistance. The low viscosity provides for maximum penetration into porous surfaces. It is the only resin available that is FDA approvable for food applications.

TAP Waterclear Surfboard Resin is a low viscosity, fast curing resin, with UV inhibitors which protect its clear appearance over time in a marine environment. Ideal for any fiberglass application where maximum transparency is important. Surfboard resin also has good impact resistance and resists cracking or crazing when flexed, which is ideal for surfboards.

TAP Marine Vinyl Ester Resin is the top of the line polyester with outstanding chemical, corrosion, water, and heat resistance. Besides being a low viscosity thixotropic resin, it offers many of the superior properties found in epoxy resins.

TAP Surface Curing Agent
Add Surface Curing Agent to resin and MEKP to improve sanding properties in polyester resin. Add to TAP Bond Coat, Surfboard, or Isophthalic resins, and Vinyl Ester to achieve a full surface cure. Without surface curing agent (sometimes called "wax") polyester resins will not fully surface cure even though the surface may not seem tacky.

Epoxy Resins

Epoxy resins have better mechanical strength, better adhesion, and generally better water resistance than most polyester resins. For repair work epoxy is recommended because of its ability to 'stick to stuff.' Epoxy has virtually no odor or flammability.

Unlike polyester, the ratio between resin and hardener must be carefully measured and not varied from in order to produce good results. Therefore, working time is dependent on the resin, not the mixing ratio as in polyester. Because of its adhesive properties, it is always recommended when bonding or glassing redwood, oak, teak, and mahogany. Epoxy fully surface cures without wax (unlike polyester), so sanding must be done if more than 24 hours transpires between layers.

(See back)

Because we have no control over working conditions or methods, products should be tested to establish suitability for your individual application. Our liability is limited to the price of product.