

Oak and Teak Epoxy Glue™ will glue all oily hardwoods. It also will (with proper chemical surface preparation) glue a wide variety of metals, glass, rubber or plastic materials. The cured adhesive is completely waterproof and weatherproof.

Our expertise in molecular engineering has allowed us to make Oak and Teak Epoxy Glue largely from the natural resins of wood itself. That is why it can dissolve the natural oils of oily hardwoods, which in turn is why it bonds all oily hardwoods. Epoxy glues made from petrochemicals cannot do this.

Oak and Teak Epoxy Glue is unaffected by the natural acids common to many woods, which is why it bonds oak so readily. This is why it is *the* All Wood Glue.

This is the 2004 upgraded version of All Wood Glue, which in turn is based on our Tropical Hardwood Epoxy, famous for thirty years of gluing any wood known to man or beast.

Oak and Teak Epoxy Glue is the newest generation of products from Smith & Co., embodying our new Dual Synergistic Catalyst™, a breakthrough in the control of epoxy resin curing. This new technology not only gives a long working time, but a cure twice as fast as older-technology products. In addition, it will bring about an absolutely dependable full chemical cure at temperatures down to 28°F (-2°C). This is done while maintaining the flexibility and toughness which has been a hallmark of Smith & Co. epoxy adhesives from the beginning.

Oak and Teak Epoxy Glue is intended to be mixed one-to-one by volume, and is forgiving of minor mix ratio errors. Mixing by weight may be done at 10 parts A to 12 parts B by weight.

The pot life [working time] is three hours at 50°F, ninety minutes at 68° F, and 45 minutes at 86°F. The corresponding times to reach full cure are 60 hours at 50°F, 30 hours at 68°F and 15 hours at 86°F. The underlying principle is that chemical reaction rates double about every 18 Fahrenheit degrees.

For best results mix in one container, transfer to a second container and mix again. Allow to sit 10 to 20 minutes before use, and allow to sit on wood joints with exposed end grain or exceptional roughness for at least ten minutes before assembly. Soft rubber pads under clamp faces will maintain an even pressure on the joint as excess glue is squeezed out. High clamping pressure will crush wood fibers directly under the clamps, leading to glue-starved joints in those spots, as well as wood-under-stress, and glued assemblies of highly stressed wood will readily fail. The reason for that is that the shear strength of wood [cleavage or splitting] parallel to the grain is very low. Gentle clamping, steam-bent or thin wood laminations and cross-grain fasteners or tenons, all these contribute to a long-lasting glued wood structure.

Our Epoxy Cleanup Solvent will dissolve and clean up excess Oak and Teak Epoxy Glue before it has gelled. Once cured, there is no cleanup solvent.

Woods such as oak, teak, maple, alder, apetong, araki, pau lope, osage orange, etc., may be glued directly with our Oak and Teak Epoxy Glue™. For best results, it should be applied to both surfaces to be glued and allowed to sit long enough for the wood to soak up as much as it wants, so that when the pieces are assembled the wood will not absorb the glue that would otherwise fill the gap between the pieces, leading to a glue-starved joint. Scarf and butt joints are especially prone to soaking glue out of the joint, as it wicks into the end grain of the wood, which is the open ends of the hollow cellulose tubes of which the wood is made. Edges of plywood are notorious for soaking up liquids.

Most adhesives, even epoxy adhesives, do not bond hardwoods because the saps and resins in the wood interfere with the bonding chemistry of the adhesive. Our Oak and Teak Epoxy Glue is specially formulated (by us - we're chemists) to overcome this difficulty. We designed a chemical system that would absorb and displace the saps and resins without becoming weakened by the absorbed oils.

Oak and Teak Epoxy Glue is a very flexible adhesive, which is excellent for dissimilar woods and cross-grain joints due to its ability to absorb stress and impact

Our products have fairly long thin-film set times, and so the user has plenty of time to wipe up drips or shape into the desired form before the epoxy jells.

Do not use solvents to "clean" hardwoods before gluing. The solvents are absorbed by the wood and will cause the epoxy bond to the wood to fail. Even solvent cleaning hardwoods after gluing (while the glue is still wet) has in some cases, caused glue-line failures. Wiping up drips with paper towels is safe.

Oak and Teak Epoxy Glue contains the new Dual Synergistic Catalyst™, which guarantees a dependable full cure at temperatures as low as 28° F (-2° C).

Oak and Teak Epoxy Glue consists of two clear viscous liquid components. When mixed, it usually turns white and should be allowed to stand for about ten to twenty minutes, until it turns somewhat clear (amber) before using.

MIXING TWO-COMPONENT PRODUCTS

In mixing two-component products, it is important that the product be thoroughly mixed or it will be physically weak when cured. The most important part of the mixing process is to mix well in one container, transfer to a second container and mix again.

SMITH & CO.

Restoration Products Inc.

Copyright © 2004 Steve Smith All rights reserved

Sophisticated adhesives, sealants and coatings are two-component systems. One part has to be mixed with another part before they are applied. After a while, a chemical reaction takes place, and what is created is a filler, paint or glue with exceptional properties. It is not possible to obtain those properties by taking some simple thing out of a can.

Each of these two parts, whether they are liquids or pastes, consists of very small components called molecules. The manufacturer designed the system so that the individual molecules of each component would react with each other in certain proportions. That is why the instructions say to mix the materials in those proportions.

If the materials are mixed in different proportions, then some molecules of one or another component are left over, scattered among the molecules of both components that did react together. In that case, the material will be softer or weaker than it should be, or will soften in water when it should not. It might be a gooey mess. It is therefore important to mix the components thoroughly, so that everywhere in the mixture the ingredients are in the correct proportions, even down to the individual molecules. Visual appearance of uniformity is not always an adequate guide, as there are millions of molecules in a single inch. A few ounces of material, for example, should be mixed for at least a minute or more, until visually uniform, then transferred to a second container and the mixing procedure repeated, scraping off the mixing tool frequently. This ensures that the small amount of A or B in the bottom corners of the first mixing container has the opportunity to be thoroughly mixed with everything else.

Glues should be mixed by hand, as power mixers can whip in many small bubbles which will give a weak glue joint.

If there are any soft or gooey spots in the final cured product, that is proof that the material was not thoroughly mixed.

HYGIENE

With all modern products there are certain safety procedures that must be observed if the user is to avoid a rash or allergy developing. Do not get the resins on your bare skin. If you do, stop what you're doing and go wash with soap and water. While casual exposure at infrequent intervals may not be harmful to most people, it is impossible to predict who will become allergic after some exposure. So, be neat and work clean.