# MIRRORCOAT EPOXY™

System Three Resins

## INTRODUCTION:

**MirrorCoat** is a two-part epoxy resin system specially designed to create a high-gloss, clear decorative coating for wood and other materials. Resin systems like this are sometimes referred to as bar top coatings. But unlike most bar top coatings, **MirrorCoat** is mixed in the ratio of two parts of resin to one part of hardener by volume. This 2: I ratio makes for a harder and more heat-resistant coating than typical 1:1 coatings. **MirrorCoat**, like all epoxy resin coatings, is not resistant to degradation by sunlight. Epoxy resins will yellow slightly over time. For this reason, we do not recommend the use of any epoxy in projects where the material will be exposed to considerable sunshine nor do we recommend using epoxy on white backgrounds unless noticeable yellowing is acceptable. For example, using **MirrorCoat** on an outdoor wooden bar top that is shaded would be a great application for this product.

**MirrorCoat** will attempt to level itself as it cures. Your surface should be as level as possible or else **MirrorCoat** will try to pool on the lower portion and may run off the surface and drip on the floor. Always use a plastic drop cloth on the floor when working with this product.

While we have formulated **MirrorCoat** to be simple to use, there are some steps that, when followed, will produce better results. This brochure discusses the tips and tricks for using **MirrorCoat** to create beautiful projects. Please read and understand this information before proceeding. Call us on our technical support line with questions. The number is 509 493 3464.

Any airborne dust that lands on a curing epoxy surface will float and leave a small bump in the cured coating. To minimize this problem work as much as possible in a dust-free environment. Take the time to vacuum the area so that dust isn't stirred up while applying **MirrorCoat**. Clean the surface carefully using lint free rags dampened with paint thinner. Allow all the thinner to evaporate before application. Avoid tack cloths as they may interfere with the wood/epoxy bond. After application leave the room so that the air in the room stays as dust-free as possible. If dust can't be eliminated during application, **MirrorCoat** may be sanded and polished to a high gloss after curing is complete.

## UNDERSTANDING THE PROCESS:

**MirrorCoat** is usually applied to porous surfaces. Like any liquid, it will try to flow into the nooks and crannies and displace any air that is present. During this process the epoxy is curing which causes the material to get thicker until it becomes rubbery and finally solid. Any displaced air will try to rise through the thickening liquid. Air bubbles may not be able to rise to the surface and pop before the material cures. If this happens you will be left with bubbles in the cured coating. Minimize this problem by applying the material in two coats as described below.

## MEASURINGAND MIXING:

Always use **MirrorCoat** at a ratio of two parts of epoxy resin to one part of hardener by volume. For those who would rather measure by weight, this is exactly the same as 100 parts of resin to 44 parts of hardener by weight. Mix only the amount of MirrorCoat that can be applied in 30 minutes. When measuring be sure that an error is not introduced in the process. For example, if measuring cups are used and the material is mixed in a third container each cup must be scraped clean into the third container or a considerable error can be introduced. Small errors are tolerable.
As noted above, it is important to mix **MirrorCoat** thoroughly. However, too much vigorous mixing will introduce more air into the mixture. Mix from the bottom to the top and scrape the sides of the container as well as the mixing stick. Large batches take a lot longer to mix with the introduction of more air; so it is advantageous to make several smaller batches for a big "pour."

For planning purposes five fluid ounces will cover one square foot 1/16-inch deep. The formula is 80 divided by the depth in inches equals the number of fluid ounces per square foot. There are 128 fluid ounces per gallon.

## APPLICATION:

Best results are obtained when **MirrorCoat** is applied in two coats allowing the product to cure between coats. Do not apply MirrorCoat in direct sunlight. Optimal results are achieved when the temperature is stable or falling at the time of application. Sanding between coats is not required unless the previous coat has cured for more than 72 hours. Good planning will avoid extra time spent sanding. Apply the first coat and allow it to soak into the wood. This can be brushed on thin because most of it will be removed with the squeegee. Work the material into any nooks and crannies gently to avoid frothing. A plastic squeegee works well for this. After about thirty minutes (twenty in hot weather) squeegee the surface to remove most of the **MirrorCoat**. Discard what you remove because it will contain a lot of air: Allow the surface to cure overnight. This step seals the surface so that air can't release and rise through the much thicker second coating.

The following day inspect the surface for any bubbles or craters. Break them by sanding if necessary. If the material sands gummy and clogs the paper, wait another day for additional curing.

Now is the time to glue down display objects in the coating. Mix and apply a small amount of **MirrorCoat** for this. When doing this. remember the coverage formula. An attractive piece of ceramic tile that is 3/16 inches thick is going to take almost a pint of material per square foot cover. If the surface is three by four feet, it will take a total of 1.5 gallons of mixed **MirrorCoat** to imbed that piece of tile! For this reason some professionals route a shallow cavity into the wood and glue thicker pieces into these cavities. The effect will be somewhat different when using this technique. Very thin pieces can be applied so that they appear to float in the cured **MirrorCoat**. To do this apply a second thicker coat before the final topcoat. Because **MirrorCoat** is an oily liquid it may soak into some porous materials like paper and make them translucent. Check your chosen techniques in the planning stages by making a test sample on some scrap plywood. Make sure that the desired effect is achieved.

Prepare for the next coat by again eliminating any dust and checking to see that the surface is level. Estimate the amount of material needed. Measure and mix as before. This time pour the mixed **MirrorCoat** directly on the surface in an "S" shaped stream. Spread the material with a brush or squeegee to a level surface. Gravity and time will complete the leveling process. Inspect the surface for any brush hairs. Complete the process with additional batches of material. Fanning the surface quickly and lightly with a hot air gun held about a foot from the surface will remove surface bubbles. Make sure the fanning is rapid so that the surface is not heated. When the surface looks good, leave the room to prevent dust from circulating and allow the **MirrorCoat** to cure overnight.

The next day, if the surface is acceptable, the project is finished. Remember to let the **MirrorCoat** cure for several more days before putting it to use. If it is not perfect, decide to live with it, recoat it, or sand and buff it to the desired finish. If sanding and buffing is the choice, allow the surface to cure for several more days before beginning. Then begin by wet sanding with 320 grit paper and a good sanding block, proceed on up through 400, 600, 1000 and 1500 grit. Then use a 2500-rpm sander/polisher with a lamb's wool pad and some medium (5000 grit) buffing compound. Follow the manufacturer's directions when using this material. Next polish it out with a product like 3M Finesse-It. These products are all available at from Fiberglass Supply, Inc. After this process the surface will have a high gloss with no dust bumps. Congratulations! Now the project can be put to use.

## A FINAL WORD:

**MirrorCoat** should be treated like any fine furniture finish. Clean it with a soft non-abrasive rag dampened with water, Windex, etc. Do not use abrasive cleaners. Clean up any spills before they dry and use pads under drinks, coffee cups, etc. While **Mirrorcoat** is much more heat resistant than other coatings it is still not a good idea to place hot objects directly on **MirrorCoat**. We do not recommend the use of wax or polishes on **MirrorCoat**. These may interfere with the bonding of additional coats if the surface needs refinishing in the future. Remember to avoid long exposure to direct sunlight.