The information contained in this bulletin is based on data considered to be accurate and is intended for use by persons having technical skills and know how, at their own discretion and risk. Since conditions of use are outside our control, we can not assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

For best results the product should be used in conditions between 70° F to 85° F. The room you are Project Preparation: can occur if trying to topcoat an oil-based stain too quickly. 

48 hours, the epoxy coating can be applied on top. Fish-eye will appear as crater-like air bubbles on the surface of the epoxy and dry for at least one-week(or until fully dry), then sealed with a clear, oil-based polyurethane. After the polyurethane has cured for and can cause the epoxy to "fish-eye" or lose adhesion and lift due to the oil not being dry. Oil-based stain must be allowed to flow out and self-level. You can use a rubber squeegee or a foam brush to help spread the epoxy. Generally one to three flood coats are applied for most table and bar coatings, however you must wait between 4 to 10 hours before applying subsequent flood coats.

What You Need:
- Safety Gloves - Epoxy is very sticky.
- Graduated Mixing Cups - Accurate measurement is extremely important to achieve optimum cured properties.
- Clean Stir Sticks - Dirty sticks can cause contamination of the epoxy.
- Rubber Squeegees - These spreaders will not leave air bubbles behind as brushes can.
- Brushes - Foam or nylon brushes which do not lose bristles
- Solvent - Denatured alcohol or acetone for cleanup and wiping
- Propane Torch, Heat Gun or Hair Drier - Used by sweeping the heat or flame across the surface of the uncured epoxy to release trapped air bubbles
- Drop Cloths - Should be used to avoid spills on flooring surfaces

Beginners Notes: This product will produce professional results when applied correctly. Take your time to review some of these common problems that first time users can encounter.

1. VERY IMPORTANT: To avoid most of these common problems, you should always do a trial run with the product to insure proper understanding of how to mix and apply.
2. Always make sure that your mixing container is clean and your measuring device is accurate. This product requires that you mix at a 1 to 1 ratio by volume. Any variances from this ratio will cause the epoxy to never completely cure.
3. THOROUGH mixing is the most important part of this procedure. Even if you have experience with other types of resins, it is very easy to underestimate the amount of mixing this product requires. Depending on the quantity being mixed, it can take anywhere from 3 to 7 minutes of continuous mixing without whipping. During mixing the product will turn cloudy white and you must continue to mix until all signs of haziness and white streaks in the mixture have turned back to a completely transparent color.
4. Do not whip this product while mixing. Lifting the stick while mixing can excessively whip the product and will add a tremendous amount of air bubbles which are difficult to remove.
5. Always scrape the sides of the mixing container and stick during the mixing process. If any unmixed material remains on the side of the container and falls onto your surface while pouring it will leave an uncured wet or sticky spot.
6. While pouring the epoxy onto the surface, NEVER scrape or brush the sides or bottom of the container you just mixed in to remove every last drop because no matter how thoroughly you may have mixed, there will always be an unmixed portion stuck which can be dislodged and will leave a wet or sticky spot.
7. Never leave mixed epoxy in your bucket unattended. The longer the epoxy sits in your bucket, it will increase the chances that the epoxy will generate excess heat, begin to smoke and then cure quickly inside the bucket.
8. Cleaning the cured finish should only be done with mild soap and water. Using harsh cleaners or kitchen chemicals can cause the finish to feel tacky.

Getting Started

Project Preparation: For best results the product should be used in conditions between 70° F to 85° F. The room you are working in should be clean, dry, dust and insect-free. Settling dust can often cause imperfections on the surface of the epoxy as it is curing. Make sure your project surface is level. If not level, the epoxy will puddle in the lowest point.

Safety: Gloves should always be worn when working with epoxy. This product is nontoxic and safe for indoor use because it has virtually no odor. Epoxy may be harmful to skin so proper eye and skin protection should be worn at all times.

Surface Preparation: For most applications the wood surface on the bar or table should be sanded first and cleaned and dust-free. It is also important that any prior stains or finishes be completely dry before beginning. Any types of moisture, oils, greases or uncured finishes can potentially cause fish-eye or product curing problems.

Stains: For applications requiring stain to be applied to the wood we recommend using alcohol-based NGR stain. Allow 24 hours for the NGR stain to fully dry before applying epoxy. CAUTION when using "oil-based" stain. Oil-based stain is very slow drying and can cause the epoxy to "fish-eye" or lose adhesion and lift due to the oil not being dry. Oil-based stain must be allowed to dry for at least one-week(or until fully dry), then sealed with a clear, oil-based polyurethane. The polyurethane has cured for 48 hours, the epoxy coating can be applied on top. Fish-eye will appear as crater-like air bubbles on the surface of the epoxy and can occur if trying to topcoat an oil-based stain too quickly.
Using The Product

1. Coverage:
   In order to determine how much to mix you must know your square footage (length x width). When working on large projects it is not necessary to mix the entire amount all at once due to the difficulty in mixing more than two gallons at one time. Mixing multiple batches for one coat is acceptable when they are poured right after each other. Large projects generally require more than one person in order to facilitate proper mixing and pouring within the allotted amount of working time.

<table>
<thead>
<tr>
<th>Seal Coat Coverage Guide (48 square feet per gallon)</th>
<th>Flood Coat Coverage Guide (16 square feet per gallon)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area to Cover</td>
<td>Total Volume of Epoxy (resin + hardener amounts)</td>
</tr>
<tr>
<td>1 Sq Foot</td>
<td>3oz Total (1’/oz Resin + 1’/oz Hardener)</td>
</tr>
<tr>
<td>4 Sq Feet</td>
<td>11oz Total (5’/oz Resin + 5’/oz Hardener)</td>
</tr>
<tr>
<td>10 Sq Feet</td>
<td>26oz Total (13’/oz Resin + 13’/oz Hardener)</td>
</tr>
<tr>
<td>16 Sq Feet</td>
<td>42oz Total (21’/oz Resin + 21’/oz Hardener)</td>
</tr>
<tr>
<td>24 Sq Feet</td>
<td>64oz Total (32’/oz Resin + 32’/oz Hardener)</td>
</tr>
<tr>
<td>For Large Projects: Use formula of 48 sq ft per gallon (1/2gal Resin + 1/2gal Hardener)</td>
<td>For Large Projects: Use formula of 16 sq ft per gallon (1/2gal Resin + 1/2gal Hardener)</td>
</tr>
</tbody>
</table>

2. Measuring:
   It is extremely important that the product be measured accurately and mixed thoroughly. Clean graduated cups or tubs should be used for measuring. Measure 1 part RESIN to 1 part HARDENER. Do NOT vary this ratio, epoxies are formulated to cure at a certain mixing proportion and any variances can cause the product to never fully cure. We recommend always pouring the HARDENER into the mixing container first, followed by the RESIN. This will help the two components mix more thoroughly.

3. Mixing:
   - Combine the two components together into a larger container. The mixing container should be about 30% bigger than the amount of product you are mixing so that thorough mixing can be accomplished without spillage over the container lip.
   - Mixing of the product should be done by hand with a clean stir stick. The more product you are mixing the longer it will take to achieve a complete mixture. Beginners should generally only mix 2 quarts per batch, this should take about 4 to 5 minutes of mixing. Typically one gallon of mixture takes approx. 5 to 7 minutes of mixing. Two gallons of mixture take approx. 6-8 minutes of mixing. Only experienced users should ever attempt mixing two gallons per batch. Timing this with a watch is a good idea.
   - The process of mixing is long and will make your wrist tired, but it is the most important part of the project. As you begin to mix, the resins will immediately turn a cloudy white color. This represents the two separate components starting to blend. As you continue to mix the level of whiteness will begin to turn more transparent with the end result being a completely transparent mixture in which you can see to the bottom of the mixing container. Mixing must continue until all signs of cloudiness and hazy lines have completely disappeared. Some air bubbles are normal in the mixture, however do not whip the mixture. Whipping the mix will result in numerous tiny air bubbles which will turn the epoxy completely white with bubbles, this can result in air bubbles remaining in the cured product. Be certain that you scrape the sides of the bucket and the stick while you are mixing. It may be helpful to use a bright light next to the container to insure the mixture is combined thoroughly. After you are confident there are no more thin hazy lines remaining in your mix it is time to pour. [Tip 1: If you don’t want to take any chances of under-mixing you can wait until the mixing container starts to become slightly warm to the touch which usually assures a long enough mix. However, this also reduces your working time especially when mixing 1 gallon or more. [Tip 2: Pour quickly after complete mixing. Do not leave large amounts of mixed material in your bucket, this will cause an accelerated chemical reaction due to the heat being generated and your batch can start smoking due to this excess heat.]

4. Pouring:
   **WARNING:** When pouring the resins onto the surface NEVER scrape or brush out from the container you were just mixing from. Just dump the resins out and leave the remaining material in the container.

   a. Pouring the seal coat: The seal coat is designed to penetrate and cover any porous surfaces you will be working with. The seal coat will cut off any potential air pockets in the wood that will release air bubbles. The best way to apply a seal coat is to start on one end and pour the resin all the length of the surface. Set the container down and then use a rubber squeegee or a foam brush to drag the resin across the entire surface and achieve an even coat. Please bear in mind you do not want to achieve a build-up with this coat, it is meant only to cover up the grains of the wood or substrate. Usually only one seal coat is required. However, sometimes extremely porous wood or knots in the wood need multiple coats in order to fully seal the surface. You should wait a minimum of 4 hours before proceeding to apply a flood coat. [Dense Wood: Care must be taken with dense wood to avoid too much build-up in the seal coat. If you find yourself in this situation you should reduce the amount of epoxy being applied, either by reducing the amount of epoxy you mix up for the seal coat, or squeegeeing off the excess epoxy after you have poured it out. If your seal coat goes on too thick, you can end up with air bubbles staying trapped in the cured epoxy]

   b. Pouring a flood coat: Each flood coat self-levels approximately 1/8” thick. If depths thicker than 1/8” are desired multiple coats are necessary. You must, however, wait at least 4 hours between flood coats. The best way to apply the flood coat is: For Tables: Pour the epoxy in the middle and allow the epoxy to flow out. For Bars: Start on one end and pour the epoxy the entire length. After you are finished pouring, set the container down. Do NOT try to scrape anything else out of the bucket. Because you are pouring about three times the amount of product you did with the seal coat the material will immediately start to flow out. However, you will still want to use a rubber squeegee or foam brush to help guide the material around. The less you use the brush the better. Dragging too hard on the brush will put hundreds of air bubbles into the surface which are impossible to fully remove. Once you have sufficiently covered the entire surface you will then begin the process of popping air bubbles. The best tool for removing bubbles is a small propane torch. By holding the heat source approximately 6 to 10 inches away from the surface and quickly sweeping across you will immediately see the bubbles start to pop. Other tools that can be used to pop the bubbles are a heat gun or a hair dryer. However, both of these tools move air around which increases the risk of dust settling in the coating. It is a good idea to stand by the project for at least 30 minutes after pouring in order to pop any air bubbles that suddenly appear. Other flood coat issues:
   - Bar rails or edges: the flood coat can be allowed to run over the sides which will create a coating on the vertical edges. These edges are not recommended as thick a coating as flat surfaces so you must do your best with a brush to keep the material even. [Underneath edge: Drips will form underneath the bar-rail or edge, these drips can be sanded off once the epoxy has cured. If you catch the epoxy at just the right moment in the curing process a razor knife can be used to cut the drips off.]

5. Re-Coating:
   When re-coating within a 4 to 10 hour window no surface preparation is needed. The layers will bond together as one. If you allow the previous layer to fully dry, very light sanding is necessary with some 180 or 220 grit sandpaper. After lightly sanding, you should wipe down the surface with a solvent such as acetone. Do NOT use paint thinner, aka mineral spirits. The wipe down process with the solvent should be done with a clean rag that will not leave any lint on the surface. Continue cleaning until all sanding dust has been completely removed. You are now ready to re-coat. Don’t worry about the sanding scratches. The next pour will fill in the scratches and it will look like glass again.

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6. **Curing:** After applying your final coat, the product should be kept in an as clean and dust-free an environment as possible. At 80° F degrees, the product takes approximately 12-14 hours to dry to the touch. However, the product should not be put into any type of use for at least 2-3 days which will allow it to achieve sufficient hardness. At temperatures below 80 F, the product will take longer to cure. The first couple weeks after curing the surface is more prone to scratching, so we recommend the use of coasters and placemats whenever possible. As the product ages its hardness will increase.

7. **Cleaning of Cured Surface:** When the product becomes dirty from daily use, we recommend cleaning with a solution of mild anti-bacterial soap and water. Using harsh kitchen chemicals not meant for plastics can cause epoxy to soften or become tacky.

### Advanced Techniques

After becoming familiar with the proper application procedures, these techniques can be attempted.

1. **Imbedding Pictures:** Objects such as pictures, articles and maps may be imbedded in this product. Some thin paper such as newspaper and magazines must first be sealed with a white glue or similar product. This prevents the epoxy from penetrating the newspaper and causing a transluent effect. Alternatively you can laminate thin paper in a plastic to keep the epoxy from coming into direct contact with it. Most photo quality paper does not require these extra steps. Once the papers are properly sealed they can be placed onto your project surface. Make sure your paper will lay flat before placing it. You should generally wait at least one hour after apply your seal coat of epoxy before placing the objects. Subsequent flood coats will then cover and imbed these objects.

2. **Imbedding Solid Objects:** Wood, rocks, shells, bottle caps, coins, etc. may be imbedded with this product also. All porous objects must be sealed first; either with the epoxy itself or another type of sealer such as shellac, lacquer or polyurethane. If the objects are not properly sealed they will release tiny air bubbles which will form around the object during the flood coats.

### Troubleshooting

1. **Entire Surface Is Soft, Wet or Sticky after 48 hours:**
   - Product was under-mixed. Unfortunately, as much as we stress this as the most important part of the project, it can still occur and is the most common cause of this problem. If you do not mix long enough or do not scrape the sides and bottom of the container while mixing you will find under-cured epoxy. Please re-read Section 3 of our instructions.
   - Product was inaccurately measured. You must follow the strict 1 to 1 ratio by volume. Do not guess or eyeball these measurements. Just dumping the product from their original containers is not a proper measurement. The product MUST be measured with fairly precise accuracy using a graduated tub.

### Troubleshooting

2. **Product was inaccurately measured.**
   - You must follow the strict 1 to 1 ratio by volume. Do not guess or eyeball these measurements. Just dumping the product from their original containers is not a proper measurement. The product MUST be measured with fairly precise accuracy using a graduated tub.

### Troubleshooting

3. **Sticky or Soft Spots:**
   - Sured with fairly precise accuracy using a graduated tub. Measurements. Just dumping the product from their original containers is not a proper measurement. The product MUST be measured with fairly precise accuracy using a graduated tub.

### Troubleshooting

4. **Air Bubbles:**
   - Attempting to pour thicker can cause the epoxy to generate excessive heat which in turn will cause more air bubbles, possibly cracking and shrinkage. It is advisable to wait at least 4 hours between pours to allow sufficient curing and cooling. While this product is considered clear by epoxy standards, it does have a very slight amber tone. This color is virtually unnoticeable in depths up to 1/2” thick. The color of the epoxy can become noticable in greater depths especially over light colored surfaces.

### Troubleshooting

5. **Surface Cures Uneven with Ripples or Waves:**
   - It is natural to want to use up every last drop you have mixed. However when you pour onto the surface you should sweep across the surface rapidly without holding it in one place.
   - Applying another flood coat in sufficient thickness should hide virtually all signs of the waves or ripples from the previous coat.