

# TABLE TOP<sup>PRO</sup>

## Instructions for Use

Thank you for buying MAS Epoxies Table Top! We're excited to see what you make with it. Follow the instructions here and let us know if you have any other questions. – Sincerely, MAS Epoxies Team.

### WORKING CONDITIONS:

For best results, all materials and work space should be maintained at 70°F-80°F. Epoxy is a temperature sensitive material. When cool, it's thicker and sets slower. When warm, it's thinner and sets faster. When the material or working conditions are below 70°F, MAS Table Top may become too viscous to properly release air and self level. Working in conditions or with material above 80°F, Table Top may set too quickly and become too hot and exotherm, which could cause it to yellow, distort or crack.

### CAUTION EXOTHERMIC REACTION:

Mixed epoxy generates heat. The more you mix, the hotter it will be. You must use after mixing. Only mix what you are ready to pour. NEVER leave mixed epoxy in your mixing bucket unattended. The longer the mixed epoxy sits in your bucket, the quicker it will begin to generate excess heat, set up, and may begin to smoke and then cure quickly inside the bucket.

### COVERAGE:

Coverage can depend on any number of factors, most notably coating thickness, porosity of the surface and waste, but a 1-gallon kit (½ gallon resin and ½ gallon hardener) should cover about 12 square feet in 1/8" thick flood coat. One thin seal coat followed by one flood coat is typical for application. 1 ounce of mixed material should cover about 13 square inches in a 1/8" thick flood coat.

### SURFACE PREP:

All surfaces must be clean, dry and free of contamination. Contaminants include, but are not limited to dust, oil, moisture, sap, lint, and sanding debris. DO NOT use tack cloth, paper towels, dirty rags, contaminated sandpaper, or touch the surface with oily fingers. Sand as needed and clean off sanding debris. Wipe surface down with a clean cotton t-shirt rag soaked in an oil free solvent like denatured alcohol prior to applying epoxy seal coat. DO NOT apply epoxy over oil based stains.

### SEAL COAT:

ALWAYS apply a seal coat before flood coating. Start with a prepped surface, clean dry and free of contamination. Next, apply a thin coat of mixed epoxy. Knots or indentations may take more material to seal. Take care to cover and seal any voids or cracks present. Allow the seal coat to cure to a rock hard solid and sand with 80-120 grit paper, paying special attention to imperfections such as air bubbles. Lastly, wipe clean with denatured alcohol and a cotton t-shirt rag. The purpose of a seal coat is to minimize the effects of off-gassing by creating a thin air-tight barrier between a porous wooden surface and the MAS Table Top epoxy flood coat, so air bubbles won't percolate up through the curing epoxy creating cosmetic defects.

### MIX RATIO:

The mix ratio for the MAS Table Top is 1-part resin to 1-part hardener (1A:1B) by volume, or 100-parts resin to 83-parts hardener (100A:83B) by weight. Using the recommended mix ratio is VERY important when using epoxy. DO NOT deviate to

attempt to speed up or slow down the gel time. An excess of resin or hardener will negatively affect the cure and could cause a wide range of short and/or long-term problems with your epoxy coating.

### MIXING TECHNIQUE:

Best practice is to combine resin and hardener at recommended mix ratio, mix 1-2 minutes while scraping sides and bottom of container until no streaks or striations, transfer to second container, mix 1-2 minutes again until fully blended, let sit for 1-2 minutes to allow air bubbles a chance to start rising to surface, and then use immediately. Do not scrape from the bottom or sides when pouring as this can introduce unmixed material to your project. Take extra care not to whip in excess air. The whole mixing process shouldn't take more than 5-6 minutes. If the mixed material starts to get warm, that's your last warning the curing reaction is starting to take place and you need to get the epoxy poured onto your surface ASAP.

### MAXIMUM MIXING QUANTITY:

Do not mix more than one gallon at a time. For larger projects, step pour multiple pours. Only mix up what you intend to immediately use. Exceeding max mixing quantity could cause MAS Table Top to generate excess heat, exotherm, smoke and then cure quickly inside your mixing bucket.

### MAX COATING THICKNESS:

Do not apply MAS Table Top thicker than 1/8" - 1/4" per coat. Step pour multiple layers for thicker coatings. Exceeding max coating thickness may cause Table Top to heat up and exotherm upon hardening which could cause it to yellow, distort or crack in extreme cases.

### WORKING TIME:

Epoxy is a mass and temperature sensitive material. The working time can vary drastically depending on any number of factors such as material temp, ambient temp, amount mixed, mixing time and speed of mixing. MAS Table Top has 30-minute gel time at 77°F in a 150-gram mass but will set up much faster if warmer or left sitting for an extended time in a larger mass. The more you mix up, and the warmer it is, the faster it will gel. Knowing this, 10-15 minutes is a rough average working time for a full kit at room temp. If the mixed epoxy starts to heat up in your mixing bucket, apply immediately.

### APPLICATION:

Pour mixed MAS Table Top epoxy in a "S" shaped pattern on to surface. Using the plastic spreader or foam brush provided, spread epoxy over entire surface pushing epoxy to the edges. Do not apply thicker than 1/8"-1/4" per application.

### REMOVE BUBBLES:

Let epoxy sit for 10 minutes to allow air bubbles to rise to the surface. Using a propane torch or a heat gun, apply heat 6-8 inches above the surface in a back and forth motion to remove bubbles. Be careful not to not over heat, scorch or burn the epoxy as this can cause surface imperfections. Periodically check for additional bubbles and remove as needed.

### STEP POURING AND OVERCOATING:

The maximum coating thickness of MAS Table Top is 1/8" - 1/4" per pour, but deeper coatings can be achieved by step pouring multiple layers. Each layer MUST be allowed to cool to room temperature (70-80°F) before overcoating or adding additional layers. Once cooled, you can pour the next layer without additional surface prep all the way up until you can no longer

indent a fingernail into the previous coat. No sanding necessary. That should be around 2-4 hours after pouring, but warmer temperatures will set faster, and cooler temperatures will set slower. Large batches of mixed epoxy will also cure much more quickly than small batches. If allowed to cure past the point of being able to indent a fingernail, then you will want to lightly scuff sand between coats to promote adhesion. Generally, if you can sand, you should.

#### **CURE AND FINISH:**

MAS Table Top in a 1/8" thick coat at 77°F should be tack free in roughly 4 hrs. and sandable after 8 hrs. Allow Table Top to fully cure 5-7 days before putting into service. Keep in mind that epoxy is mass and temperature sensitive. Thin coats and cooler working conditions will cure slower, and thick coats and hotter working conditions will cure faster. Like most consumer products, MAS Table Top is not UV stable. For outdoor use apply a UV varnish as a final coat to protect your epoxy coated surface from yellowing over time.

#### **Trouble Shooting**

Mistakes can happen. If you haven't used epoxy before do a test batch to get familiar before starting your project. The following are the some of the most common problems, causes and solutions you may encounter when working with MAS Table Top. Please consult our online FAQ section before beginning your project or contact us if you have any additional questions or concerns.

#### **BUBBLES:**

1. Temperature: Working in a shop or with material below 70°F will cause the mixed epoxy to become too thick to properly release air and self level.
2. Coating Thickness: Applying MAS Table Top thicker than the recommended 1/8"-1/4" maximum coating thickness will make it difficult to release air bubbles with heat gun or torch.
3. Seal coat: ALWAYS apply a seal coat to wooden surface before flood coating. Wood will off gas and percolate bubbles up through coating if you fail to do so.
4. Mixing: Mixing too vigorously will whip in excessive air bubbles into the blending resin and hardener.

#### **FISH EYE:**

Fish eyes are caused by surface contamination. Oil, wax, flecks of dust, sap, moisture, solvent residue, etc., even in small amounts, can cause surface imperfections in the coating.

#### **IMPERFECTIONS:**

To fix surface imperfections, let the epoxy surface cure to the point of sandability (typically 8-12 hrs.), then lightly sand trouble spots with 120-220 grit sand paper. Clean away sanding debris and wipe with a clean cotton rag soaked in denatured alcohol. DO NOT use a tack cloth. Next, mix a small amount of MAS Table Top epoxy and fill in the freshly sanded trouble spots. This can also be done with clear super glue for a quicker fix on small imperfections such as fish eyes. Mixed Table Top epoxy could also be diluted with roughly 2-5% denatured alcohol to help reduce mixed viscosity and improve self leveling in the affected area. Fill the spot and let it fully cure, then lightly sand the entire surface and apply another coat to level it out.

#### **NOT SETTING UP:**

1. Mix ratio: Double check the proper 1:1 by volume mix ratio was used.
2. Resin and hardener: Make sure you used resin and hardener, and not all resin or all hardener.
3. Fully mixed: Upon mixing, be sure to scrape sides and bottom of mixing container to ensure all resin and hardener are fully blended. Failing to do so can result in soft spots in coating, BUT also note below...
4. Pouring: NEVER scrape or brush the sides or bottom of the container you just mixed in to remove every last drop. No matter how thoroughly you may have mixed, there will always be an unmixed portion which can be dislodged and will leave a wet or sticky spot on your coating.
5. Temperature: If the temp falls below 60°F while MAS Table Top is initially setting up, it may stall out the chemical reaction needed to harden the epoxy. Increasing shop temp to 80°F+ for 24 hours may help to restart the chemical reaction and harden the epoxy coating.

#### **CRYSTALLIZATION:**

Crystallization can make epoxy resins appear cloudy, chunky, grainy, or even solid. This is an inconvenience rather than a problem. Once decrystallized, the epoxy resin will be good as new. To decrystallize, heat the resin throughout the container to about 125-140°F until it turns back into a clear liquid. A hot water bath works well to heat the resin. Simply fill a large basin full of very hot tap water and set the tightly sealed container of resin in it until all the crystals melt and the resin clears. Refresh the hot water bath as needed. Shake the container or stir the resin periodically during this heating process to ensure that all potential crystals have melted and can no longer act as "seed crystals." Make sure caps, containers and tools are free of crystallized resin before continuing use with the epoxy. Do not use resin that has any signs of crystallization until it has been decrystallized and is once again a clear homogenous liquid. If heating the epoxy resin is beyond your capabilities or if you have any further questions about crystallization, please contact us. We've got your back.

Unfortunately, crystallization is something that all epoxy resins are prone to. It is difficult to predict and can happen without warning, but happens most rapidly between 32°F and 55°F. Temperatures cycles, such as the fluctuations that occur between night and day, also promote crystallization. The crystalline melting point of bisphenol A epoxy resins is 107°F, so any time you are below that temp you run the risk of crystallization. Theoretically, storage temperatures above 104°F could be used to prevent crystallization all together, but that's not very practical. Instead, try to store between 60-90°F in a dry place, at a consistent temperature. Do not allow epoxy resins or hardeners to freeze during winter storage. After use, tightly reseal all containers and store products on a raised surface off the floor during cold weather and avoid storing near outside walls or doors. The good news is that crystallization is reversible and has no ill effect on the handling or mechanical properties of the epoxy resin once decrystallized and returned to a liquid state.