

TOP SECRET COATINGS

TS-100 1 PART EPOXY



What makes this product different?

1-Part Epoxy is remarkable because it is catalyzed by oxygen rather than a chemical reaction between two components, like typical epoxies, making it the latest in coatings technology. It is a single component, oxygen cured, self leveling, waterproof coating that produces a film that remains both hard and flexible at the same time making it unique. It produces a non-toxic dry film and is approved for food service applications. It retains its color and gloss without waxing, buffing or the application of a clear coating. It is economical to use because it covers two to three times the area of typical paint because its maximum dry film thickness is only two mils, half the thickness of a sheet of paper! It is a one of a kind super-premium coating that may be unlike anything you have used before so please consider the following application information carefully before moving forward with your application plans.

What to watch out for?

- **Watch your thickness:** This product is designed to go on thinner than typical paint. Your maximum wet film thickness (**WFT**) is **only 2 mils** on a per coat basis. When applied too thickly the lower layers will be deprived of oxygen which may result in extended dry and cure times, discoloration or a failed application. The recommended dry film thickness (DFT) is 3.4 mils. Multiple coats are applied to achieve the recommended DFT. Dilution is required in virtually all applications. Use only recommended thinners. Do not substitute.
- **Runs and sags:** If it runs or sags it has been applied too thickly. Adhere to the maximum recommended WFT. We encourage test applications which prevent many problems.
- **Cure times:** The curing process should be allowed to be completed naturally or with the addition of TS-160 Accelerator/Hardener before entering full service duty. We recommend the fingernail mark test to determine hardness. When it passes the fingernail mark test you know it has cured hard enough to enter full duty service. If after applying the top coat or clear coat, you notice that the painted area is soft and can be easily indented with your fingernail. The paint has been applied too thickly or you didn't let the basecoat dry long enough before applying the next coat. Solution - Just wait and let the paint dry thoroughly. This could take awhile depending how thickly it has been applied. Note: dark colors are slower to cure. Allow more time for dark colors to cure.
- **Thinning:** This product's unique formulation and high solid content means thinning is necessary to achieve the recommended 2 mil maximum WFT. Thin 5-10% with TS-605 Thinner or 15-25% with TS-101 Thinner depending on application requirements, spray tip size, desired control, equipment and application method. Proper thinning is required to achieve a leveled finish. Choose TS-605 Synthetic Thinner to speed dry time. Do not substitute any other thinners.

How should it be applied?

ALUMINUM & FIBERGLASS

- **Repair** all damage, scratches, voids and cracks.
- **Sand or scuff** the entire surface to improve adhesion.
- **Pre-clean.** Recommend using TS-695 Etching Cleaner prior to the application of primer.
- **Primer** is always required on Gel-Coat, aluminum, fiberglass, galvanized and stainless steel surfaces. The recommended primer for these surfaces is TS-664 Etching Primer which is an excellent, government spec, high-build sandable "etching" primer. Available in White for light colors and Red Oxide for dark colors.

- **Sand.** Once primer has been applied and allowed to dry at least two hours sand lightly to remove imperfections in preparation for the top coat. Finish sand with 150-220 grit sandpaper.
- **Apply top coat.** Two or more thin coats are acceptable as desired. Recommended dry film thickness is 3.4 mils. For best results recoat within 12-48 hours. There is no need to sand between applications when recoated within 48 hours.
- **Curing.** Paint should be allowed to cure before repairing runs or sags.

NOTE: TS-160 Accelerator/Hardener is optional.

MASONRY, BRICK & POROUS TILE (floors excluded)

- **Repair:** Repair and fill all voids, cracks and divots.
- **Clean thoroughly:** Recommend bead blasting, power washing or sanding to remove loose scale or old paint. Recommend using TS-695 Etching Cleaner to open the pores and remove leaching lime. Allow to dry thoroughly before painting.
- **Moisture test:** Test the moisture content of the concrete by duct taping a piece of clear plastic to the floor. If water droplets appear after four hours it is too wet. Wait until it tests dry before beginning the application process.
- **Recommended Primer:** 1-Part Epoxy is self priming in two or more coats. When applying direct to porous surfaces thin first coat 25% with TS-101 Thinner.
- **Apply Topcoat:** Apply first coat. Wait 12-48 hours before applying the second coat. Sanding is not required between coats when recoated within 48 hours.

NOTE: TS-160 Accelerator / Hardener is required in all flooring applications.

CONCRETE FLOORS

- **Repair:** Repair and fill all voids, cracks and divots.
- **Clean thoroughly:** Sand, grind or blast where required. Remove stubborn grease and oil with TSP or grease remover. Power-wash thoroughly. Use TS-695 Etching Cleaner according to label directions. Allow to dry thoroughly, usually 48 hours minimum.
- **Moisture test:** Test the moisture content of the concrete by taping clear plastic to the floor. If water droplets appear after four hours it's too wet. Wait until it tests dry before moving forward.
- **Recommended Primer:** 1-Part Epoxy is self priming on bare concrete. Recommend applying three coats with the first coat being thinned 25% with TS-101 Thinner. TS-664 Etching Primer or TS-6390 Ever-Last Epoxy Primer may be used when desired. Coverage is approx 400-425 square feet when applied direct to concrete and approx 450 square feet over primer.
- **Apply Topcoat:** Wait 12-48 hours before applying the next coat. Sanding is not required between coats when recoated within 48 hours. The second coat is applied with little or no dilution. Coverage is approx 450 sq ft per gallon. Apply evenly avoiding heavy build up.

NOTE: TS-160 Accelerator/Hardener is required in all flooring applications.

IRON & STEEL

- **Preparation:** Remove all rust, dirt and mill scale with a grinder or sander.
- **Pre-clean:** Use a good pre-paint cleaner. Recommend TS-5679 Rust Converting Cleaner on rusty surfaces to kill and convert rust to a paintable oxide. For clean bright metal surfaces we recommend using TS-695 Etching Cleaner.
- **Apply primer:** Recommend TS-900 Fabrication Primer, TS-664 Aluminum & Fiberglass Primer or TS-6390 Ever-Last Epoxy Primer according to label directions.
- **Sand:** Once the primer has been applied and has been allowed to cure acceptably. Sand lightly to remove imperfections in preparation for the top coat. Recommend finish sanding with 220 grit sandpaper as needed.
- **Apply top coats:** Apply two or three thin coats of 1-Part Epoxy as desired avoiding heavy build up and ponding. Finished dry film thickness is usually 2-3 mils. For best results recoat within 24-48 hours. Sanding between coats is not required.

- **Additional coats:** Additional coats are optional. Multiple coats may be desired to increase film build or increase longevity. Multiple coats of 1-Part Epoxy Clear may be applied to increase its brilliance and depth.
- **Cure time:** Top coat film should be allowed to cure before repairing runs or sags. Allow top coat film to cure thoroughly before entering full service duty.

NOTE: TS-160 Accelerator/Hardener is not typically used on iron and steel except in flooring applications. It's use increases hardness, chemical resistance and speeds cure times.

WOOD

- **Repairs:** Repair and fill all scratches, voids, splits and cracks with paintable wood filler. Finish sand the entire surface using 200 or higher grit sandpaper.
- **Sanding sealer:** Sealing is required when applying 1-Part Epoxy direct to bare wood. Recommend diluting 1-Part Epoxy 25-50% and using it as a seal coat. Repeat as needed to achieve a sealed surface. An option is using TS-104 Seal-It! According to label directions.
- **Sand.** Scuff or sand lightly with fine grit sandpaper to remove imperfections.
- **Apply Primer.** As seen above 1-Part Epoxy can be self priming on wood; however, primer may be desired. Wood must be 19% or less moisture content at time of application. We recommend TS-664 Etching Primer, TS-6390 Ever-Last Epoxy Primer or TS-900 Fabrication Primer.
- **Sand.** Once primer has been allowed to cure; sand or scuff lightly to remove imperfections.
- **Apply top coats.** Recommend two or three coats of 1-Part Epoxy properly diluted @ 2 mils WFT. Apply evenly avoiding heavy build up. Finished DFT is 3.4 mils +. For best results recoat within 12-48 hours. There is no need to sand between applications when applied within 48 hours.
- **Additional coats:** Additional coats are optional. Multiple coats increase brilliance and depth.
- **Cure time.** Top coat film should be fully cured before repairing runs or sags.

NOTE: 1-Part Epoxy is acceptable for use on pressure treated wood. TS-160 Accelerator/Hardener is required in all flooring applications.

GLAZED TILE, SHOWER STALLS, BATH TUBS, SINKS, COUNTERTOPS & GLASS

- **Repair:** Repair all damage, scratches, voids and cracks with pintable materials. Allow to dry and cure fully before moving forward.
- **Sand or scuff:** Rough up surface to improve adhesion. Recommend using 100-150 grit sandpaper.
- **Pre-clean.** Recommend using TS-695 Etching Cleaner according to label directions prior to the application of primer.
- **Primer:** Primer is always recommended on nonporous materials including glass, Formica, laminate materials, fiberglass, porcelain and glazed tile. We recommend TS-664 Etching Primer which is an etching primer.
- **Sand:** Once the primer has been applied and allowed to dry sand as needed to remove imperfections.
- **Apply top coats:** Apply two or more properly thinned coats as desired. Apply evenly avoiding heavy build up and ponding. Finished dry film thickness is 3.4 mils. For best results recoat within 12-48 hours. There is no need to sand between applications when applied within 48 hours.
- **Additional coats:** Additional coats are optional. Multiple coats are desirable in many applications to increase film build or longevity. 1-Part Epoxy Clear is often used as the wear layer and may be used in combination with aggregate or decorative additives such as mica, Colorquartz and Super-Fleck Chips. Recommend using TS-160 A/H on sinks, countertops and high traffic areas.
- **Cure time.** Top coat film should be fully cured before repairing runs or sags.

NOTE: TS-160 Accelerator/Hardener is optional. It is recommend it in all sink, countertop and flooring applications. It's use increases hardness, chemical resistance and speeds dry and cure times. It is recommended in this application. With the use of TS-160 A/H Floor surfaces should not be considered ready for full service duty until allowed to cure 72-96 hours.

ASPHALT DRIVEWAYS, WALKWAYS & ROOFING MATERIALS

- **Repair** and fill all voids, cracks and divots.
- **Clean:** Recommend power washing to remove dirt, loose scale or old paint. Use TS-695 Etching Cleaner to remove contaminants, open the pores and improve adhesion. Allow to dry thoroughly before moving forward.
- **Application:** Apply product directly to clean dry surface with minimum dilution. Brush, roll or spray evenly. Primer is optional. Where Primer is desired we recommend TS-6390 Ever-Last Epoxy Primer or TS 664-Etching Primer. One or more thin coats may be applied as desired. Finished dry film thickness is 3.4 mils. For best results recoat within 12-48 hours.
- **Cure time.** Allow top coat film to cure thoroughly before entering full service duty.

NOTE: TS-160 Accelerator/Hardener is required in all flooring applications.

Spray Application Instructions

This information will help you achieve a better finish when spraying. Additional information can be found on the label or on our website www.topsecretcoatings.com. Please be sure to read all instructions, including this information before spraying. Remember, this is unique and may be different from anything you have used previously so please read carefully.

1. Recommended tip for airless Sprayers: .015 to .021 tip. Thinning will be necessary. We recommend using only TS-101 and TS-605 Thinners. Do not substitute with other products.
2. Before doing anything else, stir thoroughly for 4 – 5 minutes with a lifting motion to bring the heavy solids to the top. Do not shake.
3. Thin as necessary, typically 10-25% with TS-101 and 5-10% for TS-605 Thinner depending on the ambient temperature, film thickness desired and type of equipment used. Recommend TS-605 Thinner to speed dry times. When adding TS-160 Accelerator/Hardener mix to proper proportions and stir in thoroughly. Without the use of TS-160 your total cure time can be extended depending on color, thickness of application, temperature, humidity and air movement.
4. Let paint stand for 10-15 minutes. Before beginning to paint, stir thoroughly one more time and strain the paint TWO times. This is very important for a good sprayed finish.
5. Spray one light - medium coat; let set for 30-40 minutes. Spray a second heavier coat. Your maximum wet film thickness is always 2 mils.
6. Recoat time is 6-48 hours. Spray one light - medium coat; let set for 30-40 minutes. Spray a second heavier coat. Your maximum wet film thickness is 2 mils.

NOTE: This product is dew point sensitive. High humidity may slow dry times and could cause it to look “milky” or cause it to blush (lose its sheen). Wait until the humidity is lower if this is a concern. 1-Part Epoxy is catalyzed by oxygen, it is not chemically catalyzed like typical epoxies. If you want to improve cure times your best option is to thin with TS-605 Thinner, use TS-160 A/H and improve the movement of air over the curing film surface. With or without the addition of TS-160 Accelerator/Hardener you can expect the film to be soft at first. Without the use of TS-160 you can expect to see approximately 70% of the *total* cure within one week when applied at 2 MILS maximum thickness. The film will continue its natural curing process for 2-3 weeks, depending on film thickness, air movement, temperature, humidity and color. Once the total cure has been achieved you can expect 1-Part Epoxy to provide outstanding impact and abrasion resistance. With TS-160 you can expect the total cure within 7 days. In an attempt to speed the cure time we tried baking the paint at 150 degrees, but it just got softer and took longer to cure. Baking the film has no beneficial results do not add heat to the curing process. After 2 days the finish will still mark or scratch easily so you do not want to put this coating into full service duty too soon. It will take time to get that “TOUGH” finish you expect from this product.