

**TUFFCOAT™**  
WORLDS NO. 1 RUBBERIZED NON-SKID COATING

and

**TUFFCOAT™ MARINE**  
WORLDS NO. 1 RUBBERIZED NON-SKID COATING

# Application Manual

**Manufactured by:**

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Thank you for selecting TUFF COAT, The World's #1 Non-Skid Coating, for your project. It is essential to the success of your project that you read and follow the application instructions. Application video's can be located on our website at [www.TuffCoat.net](http://www.TuffCoat.net) or [www.TuffCoatMarine.com](http://www.TuffCoatMarine.com). Please call us at 1-877-252-9457 during normal business hours with questions or concerns.

## **SAFETY**

Before handling TUFF COAT products:

TUFF COAT Coatings are water-based, single-component products, created through a unique process of cross-linking urethanes, acrylics, and co-polymers, and utilizing recycled rubber crumb as an aggregate. It is important to review the Material Safety Data Sheet for information on Health Hazards, First Aid, Safe Handling, Emergency Information and other Product Information. This information can be found on our website.

It is recommended that you wear; protective (splash-proof) eyewear, PVC or rubber gloves, rubber boots, and protective clothing during your TUFF COAT project. The use of a respirator may be necessary if your project environment presents inhalation risks. (NIOSH/MSHA approved or organic vapor)

## **MATERIAL HANDLING & STORAGE**

Only WATER may be used to thin the TUFF COAT coating and used for cleanup. When diluting TUFF COAT use only clean water. If dilution is necessary for easier rolling or spraying, use no more than 6 ounces of water per gallon. Do not use any solvents, solvent based alcohols, thinners or lacquers to thin TUFF COAT coating and primer.

When storing unused TUFF COAT products, please do NOT allow the products to freeze.

## **CLEANING AND PREPARATION**

TUFF COAT is only as good as the surface that it adheres to. Never assume that a surface is clean unless you have cleaned it yourself. Please ensure that the surface (substrate) is sound, dry, and free of all wax, oil, grease, and loose materials. It is essential that you properly clean the surface that is to be coated.

You must remove all grease, oil, and other contaminants from the surface. Do NOT leave any residue. If there is any question of contamination, clean thoroughly with a commercial degreaser, such as ZEP Purple or Simple Green, or laundry detergent and a scrub brush. Do NOT use solvent-based products for cleaning purposes. Soap and water only.

Please protect areas that are not being coated. Use masking tape, paper, cardboard or other materials to protected areas you do not wish to be coated. If masking tape is applied, please carefully remove the tape immediately after the final application of TUFF COAT.

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## PRIMERS

TUFF COAT Primers are a required part of our coatings system and MUST be used. There are two TUFF COAT Primers, please select the correct primer for your project.

### **CP-10: Water Based Epoxy Primer**

CP-10 is a two-part, one-to-one mix; water-based primer used for concrete, wood, fiberglass, and painted surfaces. Designed for heavy use and extreme moisture areas. Can be applied to damp concrete surfaces.

### **MP-10: Water-Based Metal Primer**

MP-10 is a single component, water-based metal primer designed for bare aluminum and steel. The metal surface must be clean. Acid etching or shot blasting the metal surface will produce a properly prepared surface for TUFF COAT application.

## PRIMER APPLICATION CONDITIONS

Application Temperatures: 55° F minimum – 95° F maximum (12° C minimum – 35° maximum) Must be 5° F (3° C) above the dew point.

Relative Humidity: 85% maximum (below 80% for best results)

## PRIMER MIXING & APPLICATION

### **CP-10: Water Based Epoxy Primer**

The mixing ratio for CP-10 Primer is 1:1, Epoxy Resin:Hardener, by equal volume.

#### **Mixing CP-10 Primer:**

Use drill mixer (approximately 250-500 RPM) with metal mixing blade. Pour **hardener** contents into half-filled **resin** can and mix for 2-3 minutes until material is thoroughly blended and emulsified.

#### **Application of CP-10 Primer:**

Working out of a paint tray or bucket with grid, apply material to surface using a 3/8" nap roller cover or paint brush. (Dependent of size of your project) Pot life of primer is 90 minutes at 72°. Make sure any primer you are not using is covered and sealed.

#### **CP-10 Primer Curing Time:**

Topcoat ready in 6 hours minimum at 72°F (22°C) at 50% Relative Humidity; 48 hours maximum at 72°F (22°C) at 50% Relative Humidity.

### **MP-10 Water Based Metal Primer**

MP-10 is a single component primer and requires no additional additives. Stir with a wooden stick or drill mixer.

### **Application of Primer:**

Working out of a paint tray or bucket, apply material to surface using a 3/8" nap roller cover or paint brush. (Dependent of size of your project) Make sure any primer you are not using is covered and sealed.

### **Primer Curing Time:**

To touch is approximately one hour. MP-10 Primer is topcoat ready in 1-4 hours minimum at 72°F (22°C) at 50% Relative Humidity; 48 hours maximum at 72°F (22°C) at 50% Relative Humidity. To cure do not exceed 48 hours. If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is dependent upon temperature, humidity and film thickness.

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## TUFF COAT APPLICATION

It is recommended that you apply two (2) coats of TUFF COAT coating for light or average traffic areas and three (3) coats for heavy traffic areas. It is important to “build up” the TUFF COAT coating and do not attempt to achieve desired thickness in one coat. In order to avoid “cracking”, do not allow the TUFF COAT to pool.

### Mixing TUFF COAT

Use a drill mixer (approximately 250-500 RPM) with a metal mixing blade. Do NOT insert the mixing blade to the bottom of the TUFF COAT immediately. While mixing, slowly submerge the mixing blade into the TUFF COAT; make sure that you are distributing the rubber aggregate throughout the can/pail. You will periodically need to mix TUFF COAT throughout the application process in order to maintain that the rubber aggregate stays suspended.

### Roller Application

**ONLY USE TUFF COAT ROLLERS. Available through TUFF COAT or TUFF COAT Distributors.** Other rollers are not developed to pick up and spread the TUFF COAT evenly. Our TUFF COAT roller is specifically designed to lift the rubber material and distribute it to the surface properly.

Lightly dampen roller with water. Pour TUFF COAT into paint tray or apply directly from the 5-gallon pail. Completely saturate roller with TUFF COAT, leaving no bare spots on the roller.

Apply the first coat as a thin coat. Re-saturate the roller after each pass. Make 4 to 5 consecutive passes in the same direction, with each pass right next to the other. When applying, roll in one direction first, then roll in the opposite direction in order to properly blend the product and create a uniform textured surface. Once an area (remember 4 to 5 passes) is covered, it is helpful to run the roller very lightly over the surface to ensure even distribution of color and rubber. Repeat this process next to the previously coated section to ensure that the areas blend together.

When the surface is “touch dry” you may apply the next coat.

You will repeat the first coat instructions for subsequent applications, but be sure to apply the TUFF COAT at a right angle to the previous application.

## **Spray Application**

It is important to note that everyone's expertise with spray applications is not the same. Reaching a balance between a quality spray finish and one where the rubber is poorly distributed is dependent upon technique, spray pressure, spray gun characteristics and the temperature of the TUFF COAT. Take time and experiment with your technique, spray pressure and spray gun nozzle characteristics until you are comfortable and satisfied with the finish. When spraying, it is preferable that TUFF COAT is at room temperature (or warmer) for easier spraying. If you are spraying in colder climates, without warming TUFF COAT, achieving satisfactory spray characteristics will take some adjusting to the spray pressure.

It is recommended that a pressure of at least 40 psi be used in spraying. The spray gun should make a slight "spitting" sound. This is a characteristic of the spray gun and is necessary for an even texture. The TUFF COAT will self-level. While spraying, be careful not to blow rubber crumb away from the area you are working on as this can accumulate in other areas of the job and prevent the polyurethane from bonding with the substrate. If the rubber crumb is bouncing back at you, lower the pressure or hold the spray gun further away from the surface.

Recommended spray guns for application are featured on our websites. The texture sprayer is recommended for larger projects of 1,000 square feet or more. This machine is available for purchase or rent at most large home improvement stores.

1. Spray water out of the gun to prime.
2. Load TUFF COAT into the machine or hopper gun.
3. Before applying, spray a few short burst away from the surface to test that it is working properly.
4. Holding the gun approximately 12-24 inches away from the surface and at a 90-degree angle to the surface, spray an even, light coat over the entire surface. DO NOT APPLY TO THICK.
5. When the surface has become dry to the touch, apply the next coat.

Remember to remove any over spray immediately with a cloth and water. The TUFF COAT is very difficult to remove once cured.

Clean the spray gun with water.

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## **CONCRETE**

Unless you are absolutely sure of the (substrate) concrete history, it is important to establish the type of concrete application, the history of the concrete (if various contaminants such as oils, fuels, polishing waxes, chemicals, etc., have been in contact with the concrete) and how the application should be tackled. If there is any doubt about the concrete history or type, always test (apply) adhesion BEFORE undertaking the overall application. At times, properly prepared substrates do not allow adhesion. If the substrate is properly prepared and no adhesion results, this is usually the result of concrete contamination by chemicals or silicone type materials. These types of contaminants cannot be seen even though the prepared concrete looks clean and/or porous. Contamination substrates of this type will reveal the lifting of the TUFF COAT in sheet form, revealing adhesion to the primer, but the primer fails to establish precisely what the concrete has been exposed to and then to apply the correct cleaning agent to remove the contaminant.

For example, long-term fuels contamination will require several degreaser applications to remove all imbedded fuel contaminants. Long term beer contamination in bars will require appropriate cleaning/preparation and a significant drying time period to ensure that beer yeast contamination surfaces from within the concrete and the concrete properly dries. Without this preparation, no adhesion will be possible.

### **Degreaser**

For most projects, we recommend a commercial degreaser, such as ZEP Purple or Simple Green brands. They can be found at your local home improvement store.

When dealing with a project where the concrete has a large amount of oil we recommend caustic detergents. These types of products, rather than dissolve the "fats", emulsify them and bring the contaminants to the surface. This allows contaminants to be easily washed away when cleaning. Please follow the manufacturer instructions when using this type of product.

### **Acid Etch**

It is important to preform a light acid etch on all concrete surfaces to remove lime and mineral deposits. Use one part muriatic acid and one part water. Spray on with a weed sprayer, neutralize and rinse thoroughly twice. The acid should foam and turn the concrete white.



## Application

1. Must be fully cured, typically 28 days.
2. Concrete with a broom finish is ideal.
3. Patch all imperfections, cracks, etc. with concrete patch filler and flexible joint fillers. **DO NOT USE SILICONE PRODUCTS.** TUFF COAT will not adhere to silicone.
4. Old concrete should be cleaned and degreased with a commercial degreaser, such as ZEP Purple or Simple Green and water to remove all remaining acid, oils, lotions, etc.
5. Acid etching, sanding or shot blasting is necessary. Acid wash with a 1 to 1 mixture of muriatic acid and water. (If all acid is not properly removed, you will not obtain adhesion.)
6. Concrete should be completely clean and dry.
7. Prime the concrete using TUFF COAT CP-10 Primer as per instructions. Primer needs at least 6 hours to cure, overnight is ideal. Perform test patch to ensure adhesion.
8. Apply TUFF COAT according to Roller or Spray Application procedure.

## New Concrete

On a new concrete pour, if there is water present, a high water table or potential for water to push through the slab in the area, you must put down a vapor barrier between the grade and the concrete. If this is not accomplished, hydrostatic pressure will push the coating off of the concrete surface. The type of concrete finish is critical in the way the application is undertaken. Heavily worked and compressed concrete is NOT porous and adhesion difficulties will be experienced without the correct treatment of the substrate. (See ACID ETCH.) Likewise, metal-troweled concrete is also difficult to achieve adhesion with, while power trowelling may overwork and compact the concrete and adhesion problems may result. The primer and TUFF COAT must be able to penetrate or attach itself to the substrate in order for satisfactory adhesion. Ideally, concrete should be hand trowelled and made porous with a brush/broom finish. New concrete will take up to 28 days or more to cure properly. Unless the new concrete is dry, adhesion problems will be experienced. Remember, heavily compacted and metal-trowelled concrete is essentially waterproof. It is recommended to do a thorough acid etch.

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## **PLYWOOD, LUMBER AND TREATED LUMBER**

### **Application**

1. New lumber needs no sanding.
2. Old lumber requires sanding with 80 or 100 grit sand paper to remove any weathered or loose material.
3. Remove any peeling, cracking or chipped paint, varnish or sealer.
4. Ensure the surface is clean and completely dry.
5. Prime the wood using TUFF COAT CP-10 Primer as per instructions.
6. Test for adhesion.
7. Apply TUFF COAT according to Roller or Spray Application procedure.

## **PAINTED SURFACES**

### **Application**

1. Clean surface of all oils, grease, dirt, silicone and other contaminants. Leave no residue. Use a commercial degreaser, such as ZEP Purple or Simple Green to clean. DO NOT use any solvents or thinners.
2. Aggressively roughen the surface by sanding with 80 or 100 grit sand paper. The surface must be rough for proper adhesion.
3. Inspect for any imperfections or delamination of previously painted surface and address as necessary.
4. Prime the painted surface using TUFF COAT CP-10 Primer as per instructions.
5. Test for adhesion.
6. Apply TUFF COAT according to Roller or Spray Application procedure.

## **FIBERGLASS**

### **Application**

1. Ensure that the surface is free of waxes and other protective additives.
2. For proper adhesion, sand the surface aggressively with 80 or 100 grit sand paper to ensure the removal of all gloss from the substrate.
3. Clean and completely dry the fiberglass surface.
4. Prime the painted surface using TUFF COAT CP-10 Primer as per instructions.
5. Test for adhesion.
6. Apply TUFF COAT according to Roller or Spray Application procedure.

## STEEL OR ALUMINUM

### Application

1. All bare metal substrates should be primed after being treated for rust or removal of old paint.
2. All smooth metal must be cleaned and aggressively acid etched or shot blasted.
3. Acid etch is recommended. Make sure that you rinse thoroughly with water and do not wipe the surface with any solvent or alcohol.
4. Prime the steel or aluminum using TUFF COAT MP-10 Primer as per instructions.
5. Test for adhesion.
6. Apply TUFF COAT according to Roller or Spray Application procedure.

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