

Ultra TUFF and *Ultra TUFF Marine*

**Water Based Non-skid Polyurethane
Coatings**

**APPLICATION
INSTRUCTIONS**

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GENERAL TIPS

- It is essential that you always clean each surface that is to be coated.
- Remove all grease, oil, and other contaminants; leave no residue, clean thoroughly - if there is any question of contaminants, use a cleaner such as a commercial degreaser or laundry detergent and a scrub brush.
- Never assume a surface is clean unless you have cleaned it yourself!
- Ensure that the surface (substrate) is sound, dry, and free of all wax, oil, grease and loose materials.
- Use ONLY WATER for thinning and clean up.
- Keep The Product from freezing.

IMPORTANT!

Testing indicates that adhesion is best when a primer is used. Be sure to apply The Product within the time specifications of the primer manufacturer (CP-10 or MP-10).

PERSONAL PROTECTION

Please review the Material Safety Data Sheet for information on Health Hazards, First Aid, Safe Handling, Emergency Information and other Product Information

It is recommended that you wear: splash-proof goggles; PVC or rubber gloves; rubber boots when working with large quantities; coveralls when working with large quantities, and use a respirator if inhalation risk exists (NIOSH/MSHA approved or organic vapor).

The Product can be rolled or sprayed on without any modification!

PROPER PREPARATION IS NUMBER ONE!

HANDY HINTS

- Dilute The Product with clean water only. A dilution of 10% will reduce the solids within the product by the same amount.
- Mask off all areas not to be coated. Make sure to remove the masking tape carefully, immediately after the application of the final coat.
- Stir thoroughly before applying and stir periodically to maintain aggregate in suspension.
- In order to avoid “cracking” do not allow The Product to pool and do not apply the coats too thick during the application.
- When applying The Product, be sure to apply at right angles to the previous coat. Consult the Roller Application Instructions for specifics.

TYPES OF APPLICATIONS

We recommend 2 coats to be considered for “light” traffic and 3 coats for heavier traffic or use. The key is to “build up” The Product and not try to achieve thickness in one coat.

ROLLER APPLICATION

- Use Ultra TUFF Texture Rollers only available from Tuff Coat, LLC or a Tuff Coat Distributor. Rollers are available in Fine, Medium and Heavy Textures. Other rollers may not pick up and spread the product evenly. The roller must be capable of lifting the rubber crumb within the product, to the surface. This will not occur using soft paint rollers.
- Consult Roller Application Instructions for pretreatment of roller.
- Pour Product into paint tray or hang roller grid into 5 gallon bucket. Make sure to completely saturate roller with product, leaving no bare spots on roller.
- Apply the first coat as a thin coat. Resaturate roller after each pass. Make 4 - 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 is covered, run the roller very lightly over it to ensure even distribution of color and rubber crumb.
- When touch dry apply the subsequent coats.
- Do not apply too thick to avoid “mud cracking”.

SPRAY APPLICATION

NOTE: Reaching a balance between a quality spray finish and one where rubber is poorly distributed is wholly dependent upon technique, spray pressure, spray gun characteristics and the temperature of The Product. Experiment with your technique, spray pressure and spray gun nozzle characteristics until you are satisfied with the finish. It is preferable that The Product be at room temperature (the warmer the better) for easier spraying. If operating in cold climates, without warming the product, achieving satisfactory spray characteristics will take some adjusting to the spray pressure.

(Mask off areas as needed)

- Use only the spray gun recommended or supplied by Tuff Coat. *Superior* brand "Spraying-Mantis" hand held Hopper gun, or equivalent. Or for larger projects: *Graco* brand "Tex-Spray Compact" or equivalent.
 - Attach spray gun to a compressor airline giving pressure of at least 40 psi.
- The above spray guns require very low pressure.

SPRAY APPLICATION CONTINUED:

- Spray water out of the gun to prime.
- Before starting the job, spray a few short bursts away from the surface to test that everything is working properly.
- Holding gun approximately 12 -24" away from surface, spray an even, light coat over the entire surface. DO NOT APPLY TOO THICK.
- Keep spray gun at a 90 degree angle to the surface.
- Spray gun should make a slight "spitting" sound. This is a characteristic of the guns and is necessary for an even texture. The Product will self level.
- When surface becomes touch dry, spray subsequent coats.
- 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 gun further from the surface.
- The further away from the surface you hold the gun, the greater the texture, the closer, the finer.
- Remove any over spray immediately with cloth and water. The Product is very difficult to remove once cured.
- Clean spray gun with water after each job is completed.

PRIMERS

Primers are an integral part of our coatings system. The following primers have been tested and are available through Tuff Coat, LLC or a Tuff Coat Distributor.

- Ultra Tuff Water Based Epoxy Concrete & Wood Primer - (Part # CP-10):

CP-10, is a water based, two component epoxy primer. Designed for heavy use and extreme moisture areas. Can be applied to damp concrete surfaces.

CP-10 takes slightly longer to cure, but is by far our best primer for concrete, wood and painted surfaces.

- Ultra Tuff Water Based Metal Primer - (Part # MP-10):

MP-10 is a water based, corrosion inhibiting primer. Designed for interior and exterior metal applications. MP-10 can also be used on concrete and wood.

APPLICATION TEMPERATURE AND CURING TIME

Normally The Product will be touch dry within 1 hour and can be subjected to light foot traffic within 24 hours. PLEASE NOTE: Full curing time only affects the amount of time required to wait before subjecting the surface to cleaning, heavy loads and chemical exposure. Surface can be subjected to normal loads well before this minimum time requirement.

The coating ***should not*** be subjected to cleaning, heavy loads, or chemical exposure until fully cured after 7 days, less in hot conditions, more in cold, dry weather.

Judgement should be used when determining when the application is fully cured. Dry times in this manual are based on a temperature of 77 degrees Fahrenheit and 50% humidity.

Higher temperatures will speed up dry time and colder temperatures will slow it. The product should not be used under 40 degrees Fahrenheit.

Use fans and heat to cure the product more quickly.

Do not allow product to freeze.

IMPORTANT: DO NOT USE ANY SOLVENTS, SOLVENT BASED ALCOHOLS, THINNERS OR LACQUERS, TO THIN PRODUCT.

CONCRETE

GENERAL ADVICE FOR CONCRETE APPLICATIONS

Taking into account the following specifically listed concrete notes, 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 at all about any aspect of the concrete history or type, always test (apply) adhesion **BEFORE** undertaking the overall application.

At times, apparently 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 can not be seen even though the prepared concrete looks clean and/or porous. Contaminated substrates of this type will reveal the lifting of The Product in sheet form, revealing adhesion to the primer, but the primer fails to adhere to the substrate.

The solution to resolving these types of problems is 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 fuel 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.

CONCRETE CLEANING

Degreasers: Are usually kerosene based. They are designed to dissolve the oils, fats, grease, etc. It is very important when using a degreaser that the clean up is absolutely thorough and complete and that no dissolved fat residue is left on the concrete. This is achieved by repeating neutralizing rinses (water) of the concrete.

Caustic Detergents: These type of products, rather than dissolve the "fats", emulsify them and bring the contaminants to the surface. This allows the contaminants to be easily washed away when cleaning down. This is the recommended method of cleaning oily concrete surfaces. It is very important to follow the manufacturer's instructions to the letter.

Important: It is important to do a light acid etch on new concrete and concrete that has been exposed to pool water to remove all lime and mineral deposits. Use two parts water and one part Muriatic acid. Spray on with a weed sprayer and neutralize and rinse thoroughly.

CONCRETE FINISH

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. Likewise, metal trowelled concrete is also difficult to achieve adhesion with, while power trowelling may overwork and compact the concrete and adhesion problems may result. The Product or the primer used must be able to penetrate or attach itself to the substrate in order that satisfactory adhesion occurs. Ideally, concrete should be hand trowelled, porous with a brush/broom finish. New concrete will take up to 28 days to cure properly. Unless the new concrete is dry, adhesion problems will be experienced. Remember, heavily compacted and metal trowelled concrete is essentially waterproof.

CONCRETE

1. Must be fully cured.
2. If concrete surface has a porous texture, no further surface preparation is necessary.
3. If the concrete surface is NOT porous then acid etching, sanding or shot blasting is necessary. Make sure to use a light acid etch and to remove all remaining acid with soap and water and scrub brush. (If all acid is not properly removed, you will not obtain adhesion).
4. Concrete should be completely clean and dry.
5. Patch all imperfections, cracks, etc. with concrete patch filler and flexible joint fillers.

These are available at your local hardware store

DO NOT USE SILICONE PRODUCTS. (The Product will not adhere to silicone).

6. Prime with CP-10 as per instructions on label. When you feel primer has properly cured, preform test patch to insure adhesion.
7. Apply The Product.

PAINTED SURFACES

1. Aggressively roughen surface by sanding with 36 or 40 grit sand paper. The surface must be rough to proper adhesion.
2. Clean surface of all oils, grease, dirt, silicone and other contaminants. Leave no residue.
3. Inspect for any imperfections or delamination of previously painted surface.
4. Test for adhesion. Prime with CP-10.
5. Apply The Product.

ASPHALT

1. Clean surface by pressure-washing.
2. Insure surface is completely dry.
3. Apply asphalt primer. Asphalt primer is available through Sherwin Williams (Part # 8000-01786).
4. Test for adhesion first, before completing job. Apply The Product.

STEEL AND ALUMINUM

All bare metal substrates should be appropriately primed after being treated for rust or removal of old paint.

1. All smooth metal should be cleaned, and aggressively roughed by sanding with 36 or 40 grit sand paper OR by acid etch. (ACID ETCH IS RECOMMENDED).
2. Clean and dry surface.
3. Prime with MP-10.
4. Test for adhesion first, before completing job. Apply The Product.

RUBBER

1. Sand with 36 Or 40 grit sand paper.
2. Clean and dry surface.
3. Prime with rubber primer. Rubber primer is available through Sherwin Williams (Part # DTM Bonding Primer B66 A 50 136-0668).
4. Test for adhesion first, before completing job. Apply The Product.

PLYWOOD, LUMBER AND TREATED LUMBER

1. New lumber needs no sanding. Old lumber requires sanding with 36 or 40 grit sand paper.
2. Remove any peeling, cracking, or chipping paint, varnish or sealer.
3. Ensure surface is clean and completely dry.
4. Prime with CP-10.
5. Test for adhesion first, before completing job. Apply The Product.

FIBERGLASS

1. To insure good adhesion, first sand the surface aggressively using a 36 or 40 grit paper to ensure the removal of all gloss from the substrate.
2. Insure that the surface is free of waxes and other protective additives.
3. Clean and completely dry surface.
4. Prime with CP-10.
5. Test for adhesion first, before completing job. Apply The Product.

STORAGE AND REPAIR

STORAGE

- To store partially used cans, seal can well (airtight) and place in cool, dry place. The contents should be useable for at least 12 months.
- The evaporation of the water within the product will cause the product to cure. If some water content has evaporated, reconstitution with clean water may restore product viability if the curing process within the can is not too advanced.

REPAIRING

- In the event that The Product is damaged, it can easily be repaired, or over-coated, because it bonds to itself.
- Remove all damaged product. Use a sharp knife such as a utility knife to make a well-defined area such as a square and eliminate uneven edges.
- Sand area with 36 or 40 grit sandpaper so that the new application can get a good grip. Slightly bevel the edges of the existing product so that the new product can fill in the cutout area and go slightly onto the existing.
- Clean area with water.
- Test for adhesion first, before completing job. Then apply The Product to affected area.

RE-COATING

To re-coat an application of Ultra TUFF, you must first clean the surface thoroughly to remove all oils, grease, and dirt. Prime with CP-10, then re-apply product.

MAINTENANCE

· Most general floor cleaners have been tested and will work well. Such as; *Simple Green, TSP, Laundry Detergents, Citrus Orange Cleaners, Commercial Degreasers, etc.*

DO NOT USE BLEACH, BLEACH PRODUCTS OR CAUSTICS.

- For best results, use a stiff bristled deck brush to agitate cleaner on the surface.
- Rinse surface thoroughly to remove all residue.

Surfaces can also be cleaned with use of automatic scrubbers. These are machines which, in one pass, put down the washing solution, scrub the floor with a light pad, and vacuum up the dirty water. It should be pointed out that the pad pressure used in the scrubber must be light and need only be sufficient for the pad to make light contact with the floor. **Heavy scrubbing will negatively affect the coated surface.**

ADDITIONAL QUESTIONS?

Questions on the application process or on the product, contact your distributor or call Tuff Coat, Inc. (877) 252-9457 TOLL FREE or e-mail technical questions to: utwest@frontier.net

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REMINDER:

If you are about to quote or undertake any major projects or are in any doubt about surface preparation, please contact us so that professional advice can be given. Be sure that you supply us with adequate information on the substrate and any other issues that may require consideration, i.e., site description, previous and/or current uses for the area, amount of wear.

Most application failures have been due to inadequate or improper substrate preparation.