TruAlloy™ For Concrete for Garage Floors, Industrial Floors and Commercial Application.

This is not a substitute for product labels and manufacturer instructions. The product label and manufacturer instructions shipped with the product ALWAYS contains the latest information. Please read all safety information.

WARNING: *Any coated surface can be slick when wet. Installation of any coating without an anti-skid is at your own risk. Generally speaking, the more coats applied the slicker the surface. Clear and color coats require anti-skid.*

UNPACKAGING

Unpackaging your product before application is necesary to ensure your install goes well. In many cases, your order will ship from multiple locations and in a small percentage of projects, an essential item may go missing or be damaged in transit. Checking everything ahead of time is important. We do not overnight coating products. Make sure you keep extra supplies handy. Those include but are not limited to extra pails, gloves, roller covers, solvents for cleaning and a respirator is a must.

GENERAL

As with all coating guidelines, these steps are not meant to substitute for common sense and actual field experience. It is not possible to discuss every situation. Please contact your distributor if you have additional questions. *Instructions provided online may be updated more frequently than the print version. Always verify this information with the current installation instructions on our website.*

STORAGE

Shelf life defines the total amount of time a product can sit on the shelf. Shelf life includes time spent in transit, time at the plant and time at distribution. We highly suggest using the product within 60 days of receipt. Store in temperature-controlled environment in a well-sealed container. Do not allow to freeze.

CLEANING THE SURFACE

It is important that your concrete is free from oils, dirt, dust and other contaminants. We suggest All Weather Floors Industrial Cleaner. More stubborn oil stains may need to be removed using oil specific products.

Common Terms

Full Broadcast System: One coat of color completely covered in flake. Two coats of clear.

Broadcast: Two meanings. First the type of flake system as discussed below. Second the method of applying flake. They are applied by hand, tossing in an upward motion. That process is referred to as broadcasting the flake.

Random Broadcast: A coating system where both the coating and the flake are visible. Our kits include 1 pound of flake Per 100 Sq. Ft. You may use less as desired, but we do not suggest using more.

Full Broadcast: A coating system where flakes are broadcast into the coating until no more flakes will stick. Also referred to as broadcasting to rejection. When properly done you should not see the color coat at all.

Coverage: Typically expressed in a range, this is literally how far to spread a gallon of material. Coverage is never determined by sight or feel. If the coverage rate or spread rate is 275 Sq. Ft. per gallon, you will spread one gallon of coating over 275 Square feet EVEN if it looks or feels too thick or too thin.

Square Foot: A 12” x 12” area. Multiple 12” x 12” areas are expressed as Square Feet. A 20x20 area would be 400 Square Feet.

Anti-Skid or Anti-Wear: A material added to the final clear coat to increase slip resistance and wear resistance. For this system it is a fine white powdery substance packaged in a translucent container with a white lid.

Moisture: Moisture, in the context of concrete, does not necessarily mean visible water. Moisture content cannot be determined visually. An appropriate testing method must be used.

Surface Profile / Concrete Surface Profile: Expressed as 'CSP'. The higher the number the 'rougher' the surface. CSP2 would be rougher than CSP1. There are many images available online

Coverage

Don't you hate it when you buy a can of paint and it says it will cover 1,000 Sq. Ft. and half that later you are on your way back to the store? Coverage on any product will vary and you should account for this when placing your order. We are aware of similar systems promoting higher spread rates. While it makes systems appear to be less expensive, running out of material or applying to thin can spell disaster. We chose to quote higher Mil, safer ranges to make sure you don't run short or have undesirable results.

Coat 1: AWF-100	250-275 Sq. Ft / Gallon
Coat 2: AWF-100	300-325 Sq. Ft. Per Gallon
Clear Coat: AWF-192	375-400 Sq. Ft Per Gallon

Surface Preparation

In all cases of surface preparation, the pH should be checked. A pH reading of 7.0 to 8.5 is acceptable. Also, a Water Dissipation Test should be made on random areas of the floor to determine if the proper degree of porosity has been achieved. If the water is absorbed into the concrete and leaves it wet, the substrate is porous and thus acceptable for coating. If water beads up, then there may be a hardener, bond breaker, or something else that will interfere with the adhesion of the coating.

Before the installation of any All Weather Floors Products, the substrate should be examined for moisture. Test for moisture vapor transmission using ASTM F-1869 Standard Test Method

for Measuring Moisture Vapor Emission Rate of Concrete Subfloor using Anhydrous Calcium Chloride. The maximum allowable rate is 3 lbs. per 1,000 square feet per 24 hours. Test for relative humidity in concrete floor slabs using Probes according to ASTM F-2170. This test measures the presence relative humidity of the slab below the sur-face. The maximum relative humidity should be below 80%.

New concrete must be cured at least a minimum of 28 days before applying a coating. On-grade slabs must have moisture vapor barrier in place. All laitance, sealers, efflorescence, chemical contaminants, grease, oil and other foreign material must be removed. The prepared surface must be clean, dry and structurally sound. All Weather Floors recommends mechanical preparation by means of diamond grinding to achieve a CSP-2 or CSP-3 profile, in accordance with the International Concrete Repair Institute (ICRI). Acid Etching is also acceptable and is often preferable when using thin build coatings over a surface that has not been previously coated. Please see our PDF on "A Guide to Acid Etching Concrete". The profile should reflect something similar to a 80-100 grit sandpaper. If the substrate is not properly prepared and the appropriate profile is not achieved, failure of the product to adhere to the substrate may occur.

Old concrete surfaces must be structurally sound. Any unsound areas must be repaired prior to proceeding with the resinous installation. For proper patching and repairing, use an approved repair material. Remove existing paint and loose concrete by rough sanding, sandblasting, high pressure water cleaning, shot blasting or grinding. In some cases where plant conditions allow, a stripper may be used to remove excessive build-up of paints or sealers.

Did we mention the floor needs to be completely dry?

Mixing

AWF-100 TruAlloy™ Color Coats

AWF-100 is made ready for use by stirring so that the aluminum pigment is thoroughly dispersed in the resin and a uniform "silver" color is achieved. Do not use a paint shaker. When used over a period of time, stir occasionally to maintain uniform mix. Thinning is not usually necessary. If needed, use up to 10% SA-50 Urethane Reducer which is a water free grade. Always keep partially used containers tightly sealed to prevent air moisture from reacting with the material and forming a tough skin. Skin can be removed and remaining material used.

NOTE: Always wear protective gloves and clothing while mixing and applying AWF-100. Do not get on skin.

AWF-100 is difficult to remove.

AWF-192 TruAlloy™ Clear

AWF-192 is made ready for use by stirring. When used over a period of time, stir occasionally to maintain uniform mix. Thinning is not usually necessary. If done, use up to 1 pint SA-50 Reducer which is a water free grade. Keep unused material tightly closed at all times.

NOTE: Always wear protective gloves and clothing while mixing and applying AWF-100. Do not get on skin.

Application

DO NOT THIN PRODUCT.

STOP: Read this paragraph twice. You apply TruAlloy™ like you apply paint. Using short 'W' strokes and then lightly back-rolling. If you roll on long strokes you will have roller marks. You might not see them during the install, but you will later.

Two to three coats of TruAlloy is usually sufficient for most concrete applications depending on the concrete's condition and existing damage. It may be applied by brush, roller (3/8 inch nap) or commercial spray equipment. With concrete applications, roller seems to be the preferred method of application amongst our customers. Spray Application should only be attempted by a trained professional with proper safety training and precautions. Porous concrete and heavy traffic areas may require additional coats.

We suggest adding ½ Cup to 1 Cup of our Tabular Alumina per gallon to the final coat for additional slip resistance and abrasion resistance Re-coat time is between 2-4 hours but never more than 6 hours. For color and clear coats we generally suggest working as close to the 4 hour time frame (over the prior coat) as possible and do not recommend exceeding 6 hours. For best results, recoat as soon as you can touch the previously coated section, with a gloved hand, and it

is tack free with no transfer. This window can be expanded if the humidity is below 50% and shortened considerably if the humidity is above 70%. Make sure floor is no longer tacky before walking on it. If your foot sticks it will ruin your floor. We DO NOT suggest spike shoes. Again, the 6 hours may be decreased if in a high humidity area. If the humidity exceeds 70% it is important to speak with one of our staff members before proceeding. If 6 hours has lapsed the surface needs to be lightly scuffed with 150 grit sandpaper or similar. Just enough to break the glaze. Full cure time is 72 hours.

Refinishing or touch ups are also similar, remove loose or flaky paint (if any) dirt, debris, dust, grease, oils etc., scuff the surface with 150 grit and apply more TruAlloy.

Important Notes:

- **Do not apply in direct sunlight**
- **Do not apply if raining or if rain is expected**
- **High humidity or temperature may drastically reduces recoat time.**
- **Grinding will result in more material being absorbed and additional coats may be needed.**
- **AT 70% plus humidity recoat window becomes 2-4 hours. Recoat as soon as you can safely walk on the floor. Touching floor with gloved hand is a good indication of readiness. If no paint transfer occurs, material is ready to be coated.**
- **Be especially careful with clear and white as any uncured gray may leave coating blemishes. Clear and white may require multiple coats. While you want to recoat ASAP the gray cannot be wet at all.**
- **Two coats of clear is always recommended for full broadcast applications.**
- **DO NOT THIN any product that has been formulated for concrete or any of the top coats.**
- **For random broadcast flake, full broadcast flake and antiskid please see product specific pages on the website.**

Systems:

System 1:

One coat AWF-100 and one Coat AWF-192. Flake can be used. This system will have outstanding abrasion resistance, but depending on porosity color may not be consistent and roller marks may be prevalent. This is an outstanding system when the primary concern is substrate protection.

This is system information and does not replace the product data sheet or the information on the can. Please read product data sheet for specifics on each component.

System 2:

Two Coats of AWF-100. No flake can be used. Good color consistency. Abrasion resistance not as strong as if clear was used. This is an outstanding system when the primary concern is substrate protection.

System 3:

Two Coats of AWF-100. Flake may be broadcast into the second coat. One coat of AWF-192. Anti skid should be added to the clear coat. Additional clear will be necessary for flake broadcasts in excess of 1 lb per 100 Square feet.

System 3 is our preferred system for decorative concrete floors where both performance and aesthetics are desired.

The Process

This is the basic process that would be used for a system 3 installation. For system one or two remove the appropriate steps. This process occurs AFTER all surface preparation is done. Review data sheets for AWF-100 and AWF-192.

1. The product will not come off you, your stuff, your driveway or almost anything else once cured. Make sure you are wearing long sleeves, long pants, NIOSH approved respirator N95 or better, hat and gloves.
2. Mix AWF-100 per the instructions. Use solvent resistant shedless roller. Typically 3/8" Start in the back left corner of the garage. Work in small areas. Make a W with the roller and fill it in. Lightly back-roll using the same roller and repeat until the floor is covered.
3. Wait the material in step 2 to be tack free. Typically 2-4 hours. Never more than 6. Repeat step 2 but use a coverage rate of 300-325 Sq. Ft. per gallon. If you are using a flake, have a helper broadcast flake. For pest results, get 6 feet ahead of your helper and have them maintain that distance.

This is system information and does not replace the product data sheet or the information on the can. Please read product data sheet for specifics on each component.

4. Wait for the material in Step 3 to be tack free. Typically 2-4 hours, never more than 6. Take a shop vac and remove any flake that did not stick and knock down any flake that landed on an angle.
5. Apply AWF-192 at a rate of 375-400 Sq. Ft. per gallon. The product is clear and hard to see. Work in small areas using the W pattern just like the previous coats.
6. Wait a minimum of 72 hours before returning the garage to use.

All Weather Floors

A QUICK REFERENCE GUIDE to the ACID ETCHING of CONCRETE

The following is only a suggested guide on acid etching concrete for the application of thin film coatings such as Epoxy and Polyurethanes. Contact your All Weather Floors Distributor for more detailed information on Surface Preparation on concrete surfaces.

CAUTION: Acid etching requires the use of strong chemicals. **Used improperly** these chemicals can result in **severe injury.** When handling harmful chemicals, always wear protective clothing, protective eyewear/face shield, rubber gloves and boots. Do not breathe vapors.

Always add acid to water. **Never** add water to acid!

Protect surfaces not to be etched from chemical vapors, splash and spill.

Dispose of all residual material according to local and national regulations.

Scope: Acid Etching of Concrete for the Application of Coating Systems

1. Properly clean the concrete surface first before acid etching the floor.
2. Properly mix acid solutions.
3. Wet-out concrete surface with fresh, clean, un-contaminated water. (No ponding)
4. Apply acid solution uniformly.
5. Allow acid time to react: 2 – 10 minutes.
6. Rinse/scrub surface.
7. Check profile. Should be between 80 grit - 120 grit open-coat sand paper.
8. Check the pH (ideal pH is 7.0, but 7.0-8.5 is acceptable). Neutralize surface if necessary. Rinse/scrub surface.

1. **Properly clean concrete surface.** Remove all dirt, dust, grease, oils, wax, release agents or any other contaminants that will interfere with the acid etching and preparation of the concrete surface. Mechanical cleaning with stiff bristle brushes by hand or machine will be required for cleaners to work properly. Some contaminants such and sealers and curing compounds may not be removed by cleaning and will require the surface layer of the concrete to be removed by mechanical means. (Shot blasting, sanding, grinding, or any other approved method to remove the contaminant.)

Before the acid etching process begins All Weather Floors recommends several tests:

- Confirm new concrete is cured 28 days.
- Confirm that a vapor barrier was installed.
- Check for moisture following these 2 test methods that are most commonly accepted in the industry: ASTM 1869 (Calcium Chloride Test) and ASTM 2170 (RH Probe Test)**.**
- Complete a water dissipation test on random areas of the floor to determine that the proper degree of porosity has been achieved.

2. **Properly mix acid solution**. Acids that can be used to etch the concrete are, muriatic, sulfuric, phosphoric, or citric. The most commonly used are muriatic (hydrochloric-HCL) and phosphoric acids. Use only plastic or acid resistant containers for mixing and applying acid. Acids concentrations can vary. To determine the strength and concentration to use to etch the concrete, test with a very dilute solution then add acid to container until strong bubbling action is noted in the test. Allow approximately 50 - 75 sq. ft. for rough concrete and 75 - 100 sq. ft. for smooth concrete.

3. **Wet-out concrete surface with fresh, clean, uncontaminated water.** Wet-out the concrete with fresh, clean, uncontaminated water so the concrete is uniformly wet, without any standing or ponding water. The concrete must stay wet until the acid solution is applied.

4. **Apply acid solution uniformly.** Apply acid solution uniformly over the wet surface of the concrete. The use of a plastic watering can will enable you to make sure fresh acid is applied evenly over the surface to be etched. (**DO NOT** take a bucket of acid and dump it over the floor and spread it around with a broom. It will roll over the area and will neutralize as it spreads out giving an uneven etch to the surface of the concrete.) Applied properly to a clean surface, the acid will begin to bubble indicating that the acid is reacting with the concrete. (If the acid fails to bubble on all or parts of the floor it means that the surface wasn't cleaned thoroughly enough and must be cleaned and etched again.) Use a stiff bristle brush to scrub the acid into the surface and remove the layer of concrete to create the profile needed to apply the coating system.

5. **Allow acid time to react: 2 - 10 minutes**. Allow the acid to remain on the surface of the concrete until the bubbling stops, usually between 2 - 10 minutes. Do not allow any areas of the etched concrete to dry out during this time.

6. **Rinse / scrub surface.** When the bubbling of the acid on the concrete surface slows noticeably, flush the concrete thoroughly with plenty of water while scrubbing the surface with stiff bristle brooms to remove the powdery residue from the pours of the concrete. This process may need to be repeated more than once to properly rinse the concrete. Collect and dispose of the liquids according to local and national regulations. After the floor is dry, any powdery residue that remains on the concrete must be removed before applying the coating system.

7. **Check profile. Should be between 80 grit – 120 grit open coat aluminum oxide sand paper.**
   Check the profile of the concrete surface. It should be the roughness of 80 grit – 120 grit open coat paper. The concrete must have a uniform open, porous surface before application of the coating system. The surface must be etched until this is achieved. More than one etch may be required.

8. **Check the pH (ideal pH is 7.0, but 7.0-8.5 is acceptable.) Neutralize surface if necessary.**
   Rinse / scrub surface. After the final rinse, check the pH of the wet surface. The ideal pH is 7.0, (neutral) but a pH of 7.0-8.5 is acceptable for most coatings unless otherwise specified. If the pH is below 7.0, residual acid in the concrete surface must be neutralized. One cup of household ammonia per gal. of fresh water will usually neutralize the concrete in one application.
   Apply solution uniformly over the surface. Let stand for 10 minutes before flushing and scrubbing with fresh, clean water. Re-check the pH with distilled water and repeat if pH is below 7.0.
   Use indicators such as pH strips, pH pencils, pH paper, pH sticks, or Phenolphthalein solution, to name a few. Once you have reached your desired results, make sure floor is totally dry before applying coating system.

REMEMBER: After etching, examine the concrete for uniformity. The concrete texture should be similar to a CSP1, in accordance with ICRI (International Concrete Repair Institute). The surface should be free of surface glaze, laitance, salts and loosely adhering material. Sometimes, more than one etched may be required. Reference ASTM D4260, Standard Practice for Liquid and Gelled Acid Etching of Concrete. For the best performance from a coating system, concrete must be clean and have a uniform open, porous surface before application.

For questions on surface preparation or concrete floor coatings, contact Justin Krauss at 970-773-3467 or justin@GarageFlooringLLC.com