



# Armor Chip & ArmorGranite Application Instructions

Read instructions carefully before mixing and applying

**BEFORE YOU START:** You will need to supply a roller frame and extension pole, and stiff bristle shop broom. Armor Chip must be applied between 60-95 deg F and when relative humidity is 80% or less. Material should never be allowed to freeze. It should be stored in a dry area at temperatures between 65-95 deg F the night before use. Material must be above 60 deg F for installation and slab should be 60 degrees and warmer. You can apply epoxy during colder months if the air temperature remains at 60 or higher for 8 hrs after application. In other words it's ok if the overnight temps drop below 60 as long as the epoxy had 8 hrs of curing time above 60.

If your kit came with pre-mixed chips AND individual color chip bags, pour all chips into a bucket or heavy duty garbage bag and mix with your hands for a uniform color appearance during application.

**SURFACE PREPARATION: THE MOST CRITICAL STEP** to assure the performance of the Armor Chip system is to apply the product to a clean, well-prepared surface. The surface must be free of debris, dirt, oil & grease stains, curing compounds, sealers and loose paint. New concrete should be etched twice for best results. Older floors and or very dirty floors may need to be etched a second time with Muriatic Acid mixed in a 3 Parts water to 1 Part acid ratio to get the floor completely clean. Cleaned concrete should resemble newly poured concrete. If using Muriatic Acid scrub in Baking Powder or TSP Powder prior to rinsing to neutralize the Acid. You may also use a Clean & Etch product for the second cleaning available at your local Home Improvement Center.

**1 – DEBRIS REMOVAL:** Remove any foreign substances such as any surface debris such as fiber-glass fibers (bum off with butane torch) putty, paint or any other substance that is raised above finished floor, so that the surface is smooth and even. Use running water or a pressure washer to flush the entire area to remove any loose dirt and debris from the surface. If using the crack and joint filler, repair the cracks and then etch. If using the instant crack repair kit, etch first then apply the instant crack repair after the floor has dried. You can paint over the instant crack repair without having to wait for it to cure.

**2 – ETCHING:** Cleaning, degreasing and etching. Clean floor with power washer or high pressure hose and stiff bristle broom to remove all dirt. If there is any oil or grease stains they must be removed with an oil/degreaser product. Once cleaned Mix the etching solution according to package instructions. Apply etching solution EVENLY to wet floor (floor should be wet). Vigorously spread the solution over the area to be coated with the aid of a stiff bristle broom and **ALLOW IT TO SOAK IN FOR ABOUT 10 MINUTES** or until bubbling stops.

**NOTE: DO NOT ALLOW THE ETCHING SOLUTION TO DRY.** DO FLOOR IN SECTIONS TO INSURE AGAINST DRYING. FOR BEST RESULTS SPREAD ETCH SOLUTION WITH A GARDEN SPRINKLER CAN FOR EVEN DISTRIBUTION OF THE SOLUTION TO ONE SECTION AT A TIME. A GOOD RULE OF THUMB IS TO ETCH AND RINSE ABOUT 150 SQ FT AT A TIME. IF YOUR FLOOR DOES NOT BUBBLE IT MEANS THAT CONTAMINANTS ARE PRESENT AND MURIATIC ACID SHOULD BE USED IN ADDITION TO THE ETCHING SOLUTION. After the solution has been allowed to soak in the surface for 5 minutes, scrub the entire surface again with a stiff bristle broom in an opposite direction. Rinse thoroughly the entire surface with plenty of fresh, clean water to remove all the etching solution and any loose dirt or debris, power wash off etch solution if you have one. **TIP:** You may want to wet down your driveway before rinsing etch solution to ensure no discoloration.

**SCRAPE OFF ANY DEBRIS  
THAT WILL NOT COME  
OFF WITH WATER HOSE OR  
POWER WASHER**



Broom off any puddles of water with a clean broom, squeegee, or electric leaf blower after rinsing is complete. After removing the standing water, the floor should be clean. If it does not appear to be clean or appears to be saturated with oils, then you must repeat the surface prep instructions above. Use additional etch solution, cleaner/degreaser to remove the grease, oil or dirt. A wire brush may be needed for extreme areas. To test for any sealer that may have been on the surface has been removed sprinkle some water onto the floor, if it does not bead up and soaks into the concrete then there is no sealer present. If water beads up re-etch the floor. The epoxy will not adhere properly to a surface with a sealer on it.



For best results after etching mix one box of baking soda(TSP POWDER) to 5 gallons of water. Sprinkle over floor, scrub in lightly and rinse very well. Remove all excess water and rinse a second time. This will neutralize any leftover acid residue. If there is any white residue left when floor dries, brush and vacuum up. If you used Muriatic acid, you must neutralize the floor as stated above.

Begin installation when the concrete surface is COMPLETELY DRY. **LET DRY FOR 24 HRS MINIMUM**, for best results allow to dry for two days. Not letting your floor dry out completely can result in spots of epoxy and or topcoat not curing properly and failing at a future time. After etching, your floor should have a slightly rough texture to it when you rub your hand over it. That means the floor has been profiled properly. If your floor was installed with a very smooth polished type of finish you may need to etch a second time to obtain the proper roughness. You can use Muriatic Acid or a Clean & Etch solution available at your local home improvement store for the second etching.

**3 – MIXING:** Armor Epoxy is a two component epoxy resin. It requires the mixing of the Part A' and Part B' components for the material to properly harden. **PART A AND PART B ARE MIXED IN A 2 PARTS A TO A 1 PART B RATIO.** Accurate measurements are key to a proper cure!

**NOTE:** IF YOU ORDERED A FULL KIT AND A HALF KIT OR MULTIPLE FULL KITS YOU MUST FIRST MIX ALL OF THE "A" COMPONENTS OF THE EPOXY TOGETHER TO ENSURE A UNIFORM COLOR. Once all the "A" components are mixed then you can proceed with the instructions below. You can use the mixing bucket for this purpose and then pour the Part A back into the original cans.

**STEP ONE – MIXING:** Open the part A & B cans and stir each individually with included mixing sticks. Be sure to mix the Part A well, scrape bottom and sides of can to make sure the Part A is well mixed

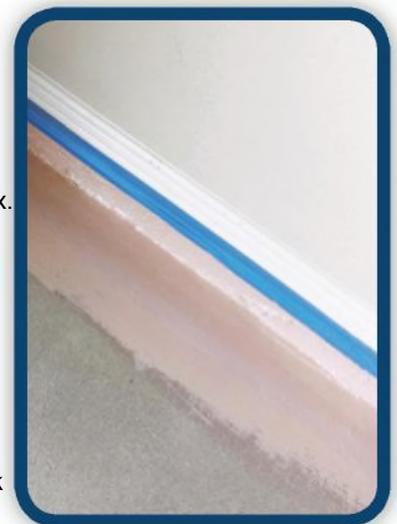
**FOR RED AND WHITE FLOORS PLEASE NOTE THAT STEP ONE IS TO APPLY THE WHITE FLASH BOND PRIMER FIRST.** Simply stir contents in can as you would regular paint and apply evenly with roller. YOU MUST ALLOW THE PRIMER TO CURE FOR A FULL 24 HOURS BEFORE APPLYING THE RED OR WHITE EPOXY. THEN FOLLOW THESE INSTRUCTIONS STARTING AT STEP ONE.



**STEP TWO–MIXING: Using three measuring containers pour 1.5**

gallons of Part A from Large bucket. This will leave 85.3 ozs in the bucket. Using another measuring container pour 42.5 ozs from the Part B container into bucket. This will result in the 2:1 ratio. We recommend 3 batches of this size per kit. Inaccurate mixing will result in the epoxy not curing. This is not covered

by the warranty. You may want to start with a smaller amount to get comfortable working with the epoxy. You can pour off smaller amounts of each part into a small container for cutting in, making sure to maintain the 2:1 ratio. Keep track of what you mix. Be certain to empty all of the material from each Part of the measuring containers into the mixing bucket. **MIX THE TWO COMPONENTS TOGETHER FOR 3 MINUTES WITH SUPPLIED MIXING; WAND ON MEDIUM SPEED.** Epoxy should be uniform in color with no streaks. Be sure to scrape the sides and bottom of the mixing bucket with the metal mixing wand to assure that all the material is properly mixed. Improperly mixed resins will result in tacky patches or show color variations when applied. This is not covered by your warranty. After mixing the two components the epoxy should be uniform in color with no streaks. **NOTE:** Should you have any small tacky spots, dip a rag into some Part B and rub into the tacky spots, spots should harden in 6-8hrs, note this does not always work



After the components are mixed together you have approximately 40 minutes of working time to apply at 75 deg F. Work diligently and quickly to avoid premature hardening and product failure. Premature hardening is not covered under warranty. **DO NOT MIX ALL THE EPOXY AT ONCE, DO NOT MIX THE EPOXY IN DIRECT SUNLIGHT.** WE RECOMMEND MIXING APROX 2-3 BATCHES PER KIT. IT'S BETTER TO HAVE SMALLER BATCHES THAN HAVING TOO BIG A BATCH THAT MAY HARDEN TOO QUICKLY. REMEMBER THIS IS NOT LIKE REGULAR EPOXY PAINT, THE MORE YOU MIX THE FASTER IT WILL CURE. HIGHER AMBIENT TEMPERATURES CAN ALSO SHORTEN POT LIFE.

**STEP THREE – APPLICATION (POUR, SQUEEGEE, ROLLER): IMPORTANT, THIS IS A 3-STEP APPLICATION PROCEDURE, 1) POUR, 2) SQUEEGEE, 3) ROLLER.** 1) Pour the mixed epoxy onto the floor in a left-to-right pattern in a bead. 2) Use the notched squeegee spread the epoxy out evenly in all directions until there is no product left under squeegee. 3) Once spread out use one of the supplied rollers and roller over ribbed epoxy to smooth out and spread edges out fully. **DO NOT LEAVE EPOXY IN BUCKET AFTER MIXING, POUR IMMEDIATELY ONTO SLAB. DO NOT USE A ROLLER PAN. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY LEAD TO PREMATURE HARDENING OF THE EPOXY.**

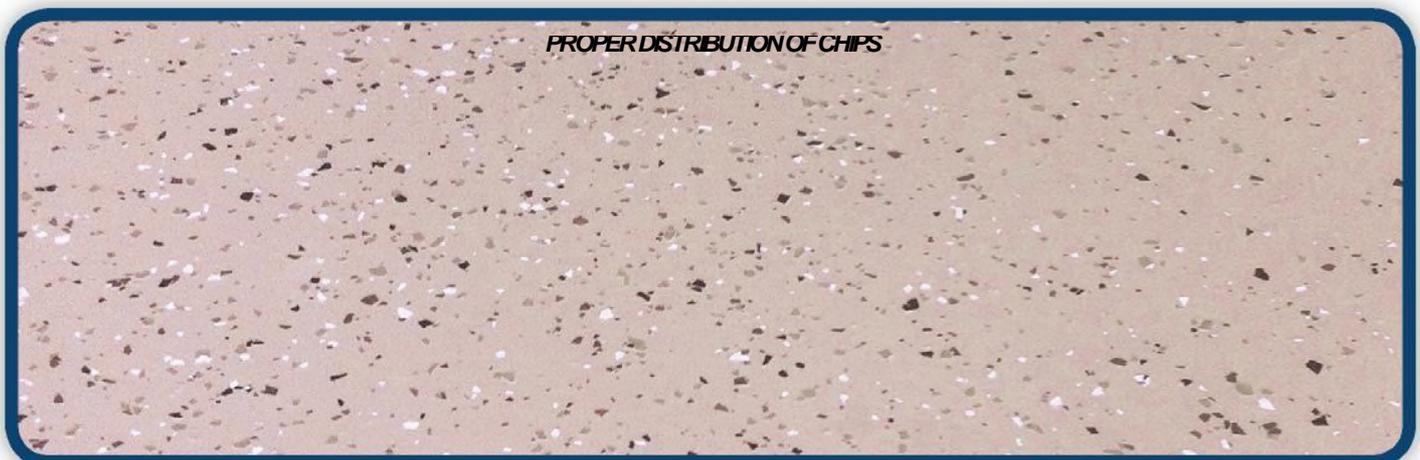
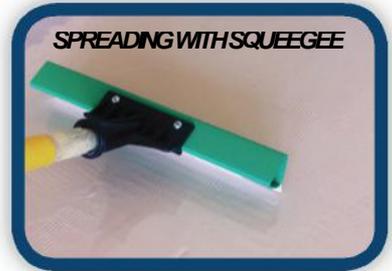
Also remember not to mix too big a batch if you didn't purchase the spiked soles. The recommended section to be done is a section of your floor from left to right and about 4-5 feet deep. This allows you to comfortably sprinkle chips in an even pattern. Spiked soles are strongly recommended.

Hard to reach areas should be coated first using the small paintbrush. You may wish to mix a small quantity of A & B in a coffee-type can and use the supplied brush for corners, edges, etc. Apply the epoxy evenly and consistently to the entire area being coated. Be careful to cover all areas and do not leave light streaks or heavy areas. Upon completion the surface should look uniform in color without streaks or heavy accumulations.

**IF YOU ARE HAVING DIFFICULTIES WITH COVERAGE OR APPEARANCE DO NOT PROCEED FURTHER, STOP AND EMAIL [SUPPORT@ARMORGARAGE.COM](mailto:SUPPORT@ARMORGARAGE.COM). YOU MAY HAVE ISSUES WITH THE POROSITY OF YOUR FLOOR OR YOU MAY BE APPLYING THE PRODUCT INCORRECTLY. THE ISSUE CAN BE ADDRESSED MUCH EASIER IF THE FLOOR IS NOT COMPLETED.**

**TIP:** Make sure that color pigments are evenly mixed. Also, when back rolling, always roll and finish in the same direction to avoid heavy areas and to assure even color. .

**STEP FOUR – CHIP APPLICATION: IMMEDIATELY AFTER APPLYING THE EPOXY TO A SECTION, APPLY THE CHIPS** by tossing small amounts up into the air at a 45 degree angle and allowing them to randomly 'rain down' onto the wet surface, fill in any blank or light spots by sprinkling tiny amounts of chips over those areas. It's better to sprinkle too few chips and add in more chips than to sprinkle too many at one time in one spot. Do not 'throw' the chips down, this will result in clumps of chips. Be careful to not over-apply the amount of chips in any one area. The chips should be applied so that the surface is uniform in the amount and random in color. Coverage should be approx 50% of the surface area for the Armor Chip and approx. 85% for the Armor Granite. **LEAVE A WET EDGE OF THE EPOXY WITHOUT CHIPS** so you can start coating your next area without disturbing the chips you already applied. If you get chips too close to the edge it's OK to roller over them with the epoxy of the new section. If you get chips on the unpainted part of the floor you can Dust Bust them up or sweep away. Continue this process working your way out of the area until the area is completed with a uniform appearance. **TIP:** You can practice applying the chips by sprinkling some over a dry area and then sweeping up for reuse.



**STEP FIVE – TOPCOAT APPLICATION:** Before applying the topcoat take a stiff bristle shop broom or floor scraper and knock off any loose or vertically standing chips this will ensure a more even textured floor finish. Be sure to remove any loosened chips from the floor. **THE TOPCOAT IS APPLIED WITH THE SUPPLIED ROLLER AFTER THE ARMOR CHIP IS DRY TO A TOUCH USUALLY IN 8 HRS.** Do not apply topcoat if epoxy is still tacky. Allowing the epoxy to dry overnight is fine. Do not let more than 20 hrs' pass between epoxy and topcoating. Open can of topcoat, mix slowly for 2 minutes. Using a standard roller/pan, roller on half the topcoat for the first coat. **LET DRY TO THE TOUCH, 2-4 HRS, AND THEN APPLY SECOND COAT.** **NOTE:** Even though the chips add texture to the floor, for enhanced safety, we recommend the included anti-slip aggregate should be added to the final glaze coat to reduce the risk of slipping on finished floors that may be exposed to wet or oily/greasy conditions. Slowly pour the contents of the non skid into the glaze and mix well to thoroughly suspend in the mixture. Continue mixing each time you refill your roller pan to assure even application. For ArmorGranite apply a third coat of glaze coat if using the non skid additive, mix into this final third coat. IF USING THE MILITARY GRADE TOPCOAT (RED LABEL CAN,) ONLY ONE COAT IS APPLIED AND THE NON SKID ADDITIVE IS ADDED AT A 1 PACK/GALLON OF CLEAR COAT RATIO. THIS APPLIES TO BOTH THE ARMOR CHIP AND ARMOR GRANITE KITS. ONLY ONE COAT OF THE MILITARY GRADE TOPCOAT IS REQUIRED.

**CLEAN UP:** Armor Chip epoxy can be cleaned off hands and other surfaces with warm, soapy water before the material begins to harden. Sticky resin on hands can be removed with mineral spirits or xylene. Fully cured Armor Chip can only be removed with industrial paint strippers or through mechanical methods such as grinding or sanding. Any leftover mixed Armor Chip, paintbrushes and roller covers will harden once the material cures and should be disposed of according to your local regulations.

**DRY TIME:** At 75 def F, Armor Chip should cure for at least 12 hours before opening the area to foot traffic. 2-4 days before driving and parking a car on it. Extreme temperatures and humidity levels can dramatically impact curing times. If the Armor Chip is not 'rock hard' after 48 hours @ 75 degrees F, then do not drive on it and call for assistance.

**COVERAGE:** When applied to a smooth/dry surface coverage is approximately 450-550 square feet per kit. Please note that lighter colors such as Beige will get less coverage. Colors such as black, white and red will also get less coverage.

**MAINTENANCE:** Armor Chip & Armor Granite surfaces are easy to maintain, a damp towel on a T-Stick should quickly wipe up any and all dirt and dust. A periodic mopping with a non-bleach mild household detergent solution and rinsing with clear water can be done if needed. The use of harsh cleaning solutions and any type of solvents is not necessary and strongly recommended that they not be used. Some cleaning solvents can affect the finish.



## **FREQUENTLY ASKED QUESTIONS**

My concrete is relatively new, do I still need to clean the floor before applying Armor Chip?

**YES**, construction dust, dry wall paste, and paint splatters can affect the bond. Scrape foreign substances from the floor and then clean the floor thoroughly. Power washing is preferred. This is mandatory step. Skipping the prep step can cause failures. New floors should be etched twice.

Do I have to remove old coatings or paint before I apply Armor Chip?

**YES**, ideally they should be, the Armor Chip epoxy may form a bond on these surfaces that is stronger than the bond of the old coating on the concrete. This could cause the old coating to pull away from the concrete, leaving an uncoated area. Leaving old coatings on could cause failure due to entrapment of moisture. If you are unable to remove the old coating, at the minimum sand and etch with the etching solution to make sure weakly adhering paint is removed. Hi-Pressure power washing is good for removing weak coatings. Then apply one coat of our Bonding Primer. Allow primer to dry for 24 hrs prior to applying epoxy.

I have stains on my concrete caused by tires of my car. Do these areas have to receive special treatment before coating?

**YES**, tires contain chemicals that leach into the concrete overtime. If too much of these substances are trapped in the concrete, then the epoxy will not adhere to them and it won't stick. These dark areas should be sanded with a rough sanding pad, scrubbed with a wire brush and apply etching solution to these areas and then rinse thoroughly. You may need to purchase additional Muriatic acid to complete the prep process.

I may have a clear sealer on my floor. How can I determine if I need extra surface prep?

The easiest way to determine this is to sprinkle water on the questionable areas of your floor. If the water beads, you have a foreign substance that must be removed. Sanding or industrial cleansers can be used to remove this problem. Also slightly diluted muriatic acid has been shown to help also. You can etch several times until water doesn't bead up on the floor.

Can I apply multiple coats of Armor Chip over a period of time?

**YES**, no special surface prep is required if the additional coats are applied within 48 hrs. If a longer period goes by, then the area should be sanded lightly to create a rougher surface to which the Armor Chip can adhere to.

Do I really need to add the anti-slip aggregate to the glaze coat?

Any coated surface, especially a high quality, smooth surface can be slippery when wet or exposed to oils and grease. As a safety feature, we highly recommend that the anti-slip aggregate be added to the final coat.

I have some cracks in my floor. Should I fill these in before applying the Armor Chip?

Filling the cracks may yield a smoother, more beautiful floor. If you have cracks, use our crack fillers (available from us). Also urethane or epoxy caulks may be used. Another idea is to hide the cracks with the deco chips.

Can I apply Armor Chip to wood?

**YES** you can, it will adhere to wood, although it was formulated for concrete application. Prime wood first with our Bonding Primer. For steps we recommend sanding the steps first to rough up.

**SAFETY:** As with any chemical, avoid contact with skin, avoid inhalation and wear protective clothing, rubber gloves and eye protection. Apply only in well ventilated areas. A respirator is recommended when applying the Military Topcoat.

**FIRST AID:** For skin contact, wash thoroughly with soap and warm water. In case of contact with eyes, flush with warm water and immediately contact a physician or go to the emergency room of your local medical center or hospital. If swallowed, do not induce vomiting. Contact a physician and the poison control center.

**WARRANTY:** ArmorGarage warrants that Armor Chip & ArmorGranite, if properly applied will not delaminate, peel or flake for a period of 5 years from date of installation. This warranty covers adequate replacement product to correct any affected areas. Acts of god, water damage, flooding, seismic movement, cracks in concrete from settling and similar issues are not covered. Misuse and normal wear/tear is not covered. Warranty is strictly limited to replacement of defective product and ArmorGarage is not liable for any incidental or consequential damages if any should occur. Use of this product constitutes agreement to these terms.

To speak to a knowledgeable representative who can answer all your questions on any product, advise you on any application issues with your project or provide quotes on large quantity jobs. Call Toll Free 866-532-3979, 8:30am to 5:00pm EST Mon-Fri.

Or email us at: [info@armorgarage.com](mailto:info@armorgarage.com), we answer all emails within one hour during normal business hours.

For emergency tech support at any time email us at [support@armorgarage.com](mailto:support@armorgarage.com), someone will respond to you promptly.