

APPLICATION INSTRUCTIONS: GRANITEX HIGH BUILD

MOISTURE VAPOR EMISSION TESTING

All interior concrete floors are subject to possible moisture vapor emission and/or excessive alkalinity that could ultimately cause coating failure. Prior to application, calcium chloride moisture testing should be conducted according to ASTM 1869-04.

SURFACE PREPARATION

Surface preparation is vital to the long-term success of the installation. All surfaces to be coated must be clean, sound and free of mastics or other contaminants that may interfere with bonding. Moisture vapor emission testing should be done using the calcium chloride test method according to ASTM 1869-04. Concrete must be acid etched, shot blasted or diamond ground to achieve a 5-10 mil profile. After proper preparation, the surface must have a profile similar to 120-grit sandpaper. Wood surfaces must be exterior grade plywood, securely fastened to the subfloor or joists. Wood must be sanded before application. For detailed preparation information, see APF Surface Preparation Bulletin.

After the initial preparation has been accomplished, inspect the surface for indentations and holes. These must be filled prior to application using Epoxy 300 Flex Paste. A flexible putty knife or trowel works well for this procedure. Patching may be done while the concrete is damp.

Generally on interior applications, cracks and control joints should be filled with Epoxy 300 Flex Paste and would have a low probability of re-cracking. Expansion joints may be filled but hairline cracking would be expected if excessive movement occurs. For exterior applications where more movement is anticipated, cracks and control joints are usually not filled, or if filled, would be expected to re-crack. Exterior felt expansion joints are normally coated well with Epoxy 300 Flex before priming.

PRIMING

After patchwork has cured firm, apply one coat of Epoxy 100 or Epoxy 200 at 300-350 sq. ft. per gallon. This creates a sealed surface for the application of the color chips.

BLENDING OF COLOR CHIPS

The unblended color chips are available in a wide variety of colors and 3 sizes – 1/8", 1/4" and 5/8" in diameter.

If the contractor chooses to purchase single color chips and do his own blending and processing, use the following procedure: Determine the total pounds of chips needed for the application by multiplying the total square feet by 0.23. This will yield enough chips to broadcast the floor to excess. (Approximately 25-30% will be recovered and may be used on a future job.) Mix the chips according to the preset formula and put them through the properly sized hardware mesh for sizing. The powder generated from processing is removed using regular household screen.

APPLICATION OF COLOR CHIPS

The color chips may be applied once the primer has dried overnight. The mechanic spreading the base coat and the mechanic broadcasting the color chips must wear spiked shoes. The color of the base coat should be similar to at least 20% of the chips used in the system. This is important because the small percentage of base coat that shows in the finished flooring must blend well with the color chips.

Mix pigmented Epoxy 400 at the required 2-1 ratio and immediately pour the material onto the surface. Mix only the amount of material that can be spread in 30 minutes. Application should be 250-300 sq. ft. per gallon. Trim the edges and all vertical surfaces with a bristle brush. Roll the surface with a 3/8" nap roller to evenly distribute the material. Be sure the coated substrate is uniform in color with no concrete shadows visible before the chips are broadcast.

Before attempting to broadcast the chips, transfer them from the box into 5-gallon buckets. The chips are broadcast by letting them fall through the fingers of the upturned palm. Do not throw clumps of chips directly onto the surface. Do not broadcast the chips from the bottom inch of the bucket. These chips have usually become smaller than the others and will create an irregular appearance in the floor. These chips can be blended into a new bucket of chips and then used.

Be sure to apply enough chips to completely cover the surface. Sometimes the base coat will seep through the chips and show as a shiny spot. Additional chips must be added to these areas before the epoxy cures. Watch for them as you go.

Spread the chips over the coated surface within 15 minutes of application of the base coat material. Do not chip the last 1-2 feet of any area that might tie into another batch of base coat. Chips are applied to a vertical surface against the coated area until enough chips have embedded themselves for a uniform appearance.

Monitor the amount of chips being used as you go. Never spread more chips than is necessary. If there is a danger of insufficient chips, be sure to get at least partial coverage of the entire area.

APPLICATION OF FIRST GLAZE COAT

The next day the excess chips are removed and the first coat of clear glaze is applied. This sequence of the application is especially critical to the finished appearance of the job. The chips are swept using a stiff bristle broom and put back into boxes. Next, the surface is aggressively scraped with a large floor scraper, going carefully in both directions. Any vertical edges are scraped with a hand scraper. The floor is now swept again using a whisk broom to get into the joint areas. Poor sweeping will result in irregularities in the finished floor. The edges and joints are vacuumed next. The person using the vacuum will scrape any chips in the joints and next to vertical surfaces as he goes. All loose chips will be removed from surrounding areas at this time.

For exterior areas, use aliphatic Polyurethane 100 UVR or Polyurethane 501 UVR throughout. For interior areas, the first glaze coat is clear Epoxy 400. When using this material, mix only the amount of product that can be spread in 30 minutes. Mix the material at the required 2-1 ratio and pour immediately onto the surface. Spread the material with a rubber squeegee (not black) to achieve a spread rate of approximately 200 sq. ft. per gallon. Back roll with a good quality, non-shedding 3/8" nap roller to achieve a uniform distribution. This is very important because heavy areas of glaze will result in smoother, glossy irregularities. It is also important not to spread the epoxy coat too heavily because this will result in the overall surface being too smooth and eliminate the possibility of achieving the final "orange peel" finish. The mechanic responsible for rolling the material should wear spiked shoes to enable him to walk back on the coated surface and continue rolling to achieve an even distribution.

If using urethane material, mix at the required ratio and pour from the mixing pail as you go. Roll first laterally across the body and then cross roll up and down for the final distribution. Do not leave puddles or ridges. Spread rate should be 200-250 sq. ft. per gallon.

If there are any areas in the floor that do not have a uniform appearance, now is the time to correct them. After wetting the area with glaze, sprinkle chips lightly over the area until it blends with the rest of the floor. Wet the roller again and back roll.

APPLICATION OF FINISH GLAZE COATS

After the first coat of clear has dried hard (16-24 hours), the floor should be sanded lightly with 80-100 grit sandpaper. The edges must be sanded by hand. Sweep and vacuum well before applying the second glaze coat. The final two glaze coats for both interior and exterior applications are aliphatic polyurethane applied approximately 250-300 sq. ft. per gallon.

The incorporation of slip-resistant particles is done in the second glaze coat. After all trim work is completed, add a full 3-oz. Dixie cup of 30-mesh Res-N-Sand to each gallon of clear polyurethane. Mix in well and apply the material out of a 5-gallon pail using the dip and roll method. All exterior applications and interior applications that may be subject to wet conditions must incorporate slip-resistant particles.

The following day, the finish coat is applied using the same dip and roll procedure. Sanding is not required prior to the finish coat. Allow 24 hours cure for light traffic and 72 hours for heavier use. Full chemical resistance develops in seven days.