

APPLICATION GUIDE

FOR EUCLID CHEMICAL DECORATIVE AND INDUSTRIAL FLOOR COATINGS

SURFACE PREPARATION

A properly prepared surface is essential to a successful coating application. The surface must be structurally sound, clean and free of grease, oil, curing compounds, soil, dust and other contaminants. New concrete and masonry must be cured 28 days. Surface laitance must be removed. The Concrete Surface Profile (CSP) should be equal to CSP 2-5 in accordance with Guideline 310.2 published by the International Concrete Repair Institute (ICRI). Pre-cast and formed concrete surfaces should be cleaned, roughened, and made absorptive by mechanical means. If it is not possible to achieve the appropriate surface texture with mechanical means, an adequate surface can be prepared by acid etching with 15% hydrochloric acid. After etching, flush with copious amounts of water to neutralize and clean the surface. All salts and residue from the reaction must be removed. Allow concrete to dry before coating application. Following surface preparation, the strength of the surface should be measured with an Elcometer or similar tensile pull tester (ASTM D 4541). The minimum tensile pull-off strength should be 200 psi (1.4 MPa).

Do not apply epoxy or urethane coatings if there is excessive moisture in the concrete or if the vapor transmission (MVT) rate is high. The concrete humidity and MVT rate should be determined before applying the coating. Two test methods can be used to measure MVT; the “visqueen” or plastic sheet test (ASTM D 4263), or the “calcium chloride” test (ASTM F 1869). After surface preparation and moisture testing, a test section application of the coating system is recommended to confirm good adhesion and compatibility of the coating with the surface.

When coating steel, all contamination should be removed and the steel surface prepared to a “near white” finish (SSPC SP10) using clean dry blasting media.

MIXING INSTRUCTIONS

Mix coating using a low speed drill motor and a “Jiffy” type mixer. Pre-mix Part A and Part B separately for approximately one minute. Combine the appropriate volumes of Part A and Part B, then mix thoroughly for 3 to 5 minutes. Scrape the bottom and sides of the containers at least once during mixing. Mix just enough material that can be used within the working life. Do not aerate the mix.

APPLICATION PROCEDURES

Select one for the following methods:

A) Floor Coatings - 10 to 20 mils; Apply properly mixed coating to the prepared surface by brush, short nap roller or notched squeegee using the application rate provide on the product Technical Data Sheet to produce a 10 mil thickness. A second coat is recommended for most industrial applications. The second coat can be applied after the first coat becomes tack free (5 to 8 hours) but no later than 24 hours after application of the first coat. The use of a primer will improve performance in marginal conditions.

B) Broadcast Floors - “Broom and Seed” (Optional) 1/16” to 1/8” (0.16 to 0.32 cm); The broadcast method consists of spreading silica sand into the coating, typically used to construct solid colored, skid resistant floors. This technique can also produce a wide variety of multi-colored floors using a clear coating and colored quartz aggregate. The application procedure is similar for both systems. Use the application rate provided on the specific product technical data to produce a 15 mil thickness. Apply the coating to the prepared substrate using a brush, short nap roller or notched squeegee. While the material is still wet, broadcast clean dry aggregate into the resin to excess – typically 20/40 mesh silica for solid color floors and colored quartz aggregate for multi-colored floors. The aggregate should appear dry after application. If any area looks “wet”, immediately broadcast additional aggregate over those areas. Aggregate application rates are 0.5 to 1.0 lbs/ft² (2.4 to 4.8 kg/m²). Allow the resin to cure. Sweep or vacuum excess. Repeat these steps until the desired thickness is achieved. Aggregate size and shape will affect final surface texture. Apply a seal coat of clear coating for color quartz aggregate floors or pigmented coating for solid color floors at the appropriate application coverage rate. This “seal coat” is intended for areas subject to no or low moisture. In areas exposed to sunlight or high intensity artificial light, color stability is improved if the seal coat is an aliphatic urethane such as EUCOTHANE, applied at 150 to 200 ft²/gal (3.7 to 4.9 m²/L).

C) Broadcast Vinyl Chip Floors - (Optional) 1/32” to 1/16” (0.08 to 0.16 cm); Apply a prime coat of properly mixed clear coating to the prepared substrate, using a brush, short nap roller or squeegee at the appropriate coverage rate. Allow to cure for 6 to 8 hours, but no longer than 24 hours before proceeding.



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Then apply properly mixed pigmented coating resin by brush, short nap roller or squeegee. While the material is still wet, broadcast clean, dry Colored Vinyl Chips to the desired concentration (typically 1/4 to 1/2 lb/ft² (1.2 to 2.4 kg/m²). Allow to cure overnight. If desired, sand to smooth surface, vacuum thoroughly and apply a clear topcoat. Allow to cure 24 hours before opening to traffic.

D) Slurry Applications (Alternative) - 1/16" to 1/4" (0.16 to 0.63 cm); Apply a prime coat of the clear coating to the prepared substrate using a brush or short nap roller. Do not allow the prime coat to become tack free. Mix pigmented coating as described in the product technical data. Prepare a slurry by slowly adding 60/70 mesh silica aggregate to the coating while mixing with a "Jiffy" mixer. The slurry proportions are 12 to 15 lbs (5.4 to 6.8 kg) of aggregate for each gal. of coating. Mix thoroughly yet do not aerate the mix. Pour the slurry on to the primed surface and spread using a notched squeegee or gauge rake. Spiked shoes are recommended. A slurry consisting of one gal (3.8 L) of mixed resin and 15 lbs (6.8 kg) of aggregate will cover approximately 20 ft² (1.8 m²) at 1/8" (0.32 cm) thickness. Backroll with a short nap roller. Broadcast clean dry 40 to 60 mesh silica into the wet slurry coat to excess. Aggregate size and texture will affect final surface texture. Allow to cure and remove excess aggregate by broom or vacuum. Apply a seal coat of coating with a flat squeegee or roller. Allow to cure for 24 hours before opening to traffic.

E) Trowel Down Method (Alternative); 1/8" to 1/4" (0.32 to 0.63 cm) The trowel down method can be used to create solid color floors using pigmented coatings and silica aggregate, or a variety of multicolored floors using clear coatings and colored quartz aggregate. The application methods are similar. Apply a prime coat of mixed clear coating to the prepared surface at the appropriate coverage rate. Lightly broadcast 20/40 mesh silica sand (1/4 lb/ft² (1.2 kg/m²) into the wet resin. Allow the prime coat to become tack free, typically 5 to 8 hours. Prepare a mortar consisting of mixed coating and a trowel grade aggregate blend or color quartz aggregate. Typical proportions are 4.5 parts of aggregate by volume to 1 part by volume mixed coating. Large quantities of epoxy mortars are typically mixed in a mortar mixer; smaller quantities can be mixed in a pail using a mortar blade mixer and slow speed drill. Gradually add the aggregate to the mixed resin. Mixing times are typically 3 to 5 minutes after all of the aggregate has been added. Ensure that the aggregate has been thoroughly mixed. Place the mortar on to the tack free, primed surface no later than 24 hours after priming. Screed the mortar to the desired thickness, trowel finish and allow to cure for 12 to 18 hours. A mortar consisting of one gal of resin and 4.5 gals of aggregate will cover approximately 45 ft² (4.2 m²) at 1/8" (0.32 cm) thickness. Apply a seal coat. In areas exposed to sunlight or high intensity artificial light, improved color stability is achieved if the coating seal coat is an aliphatic urethane such as EUCOTHANE, applied at a rate of 150 to 200 ft²/gal (3.7 to 4.9 m²/L).

APPLICATION DETAILS

Cove base: To provide a seamless integral floor system at the floor/wall transition, a cove base of 2 to 6 inches (5 to 15 cm) in height may be required. The coating mixed with aggregate can be used as a cove base.

Static cracks and non-expansion joints: Before application of the coating, static cracks and other non-moving joints should be routed, cleaned and filled with a semi-rigid epoxy joint filler or a detail coat of the intended epoxy.

Note: Depending on the specific project, correct implementation of other application details, such as floor terminations, floor/drain detail, etc. may be required. For further information contact Euclid Chemical Technical Support at (800) 321-7628.

CLEAN-UP

Clean application tools and mixing equipment immediately after use with a solvent such as acetone or methyl ethyl ketone (MEK). Clean drips or spills with the same solvent while still wet. Hardened epoxy and urethane coatings will require mechanical abrasion for removal.

PRECAUTIONS/LIMITATIONS

Ambient temperature during floor coating applications should be between 50°F and 90°F (10°C and 32°C). Substrate temperature should be at least 50°F (10°C) and rising. Working time and cure time will decrease as the temperature increases. Epoxy floor coatings will yellow upon prolonged exposure to ultraviolet light and high intensity artificial lighting. An aliphatic urethane top coat can minimize the UV effects. Application of a test area is recommended to confirm final appearance and texture of the floor with the facility owner. In all cases, consult the product Material Safety Data Sheet before use.

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WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.