



Concrete Polymer Powder

Data Sheet

Part # CPP-30

DESCRIPTION: Concrete Solutions® Concrete Polymer Powder is a special vinyl acetate-ethylene copolymer powder formulation specifically designed to be mixed with cement and sand mixtures. When added to Portland cement, sand, water and other additives in specified proportions it creates a new flexible, adhesive cementitious compound which can be used to repair and protect a variety of surfaces. Polymer Concrete, which is concrete with Concrete Polymer Powder added, is designed to combat the shortcomings of regular concrete; particularly its low flexural strength and thin section fragility. It promotes a rapid cure in thin set applications. Cement mortar or concrete modified with Concrete Polymer Powder exhibits increased physical strength: tensile strength, shear bond strength, flexural strength and compressive strength. It increases resistance to water, abrasion, freeze-thaw and chemical attack. Cementitious formulations modified with Concrete Polymer Powder exhibit exceptional toughness and durability in interior or exterior applications.

TYPICAL USES: Concrete Solutions Concrete Polymer Powder is ideal for thin section patching and resurfacing. It is designed to be prepackaged with cement and sand mixes to create ceramic tile thinset mortars and grouts, self leveling underlayments and overlayments, stuccos, patching mixes, EIFS adhesive or base coat mixes and decorative overlay mixes. It is used for 1/4" Stamped Concrete applications as well as thin section texturing applications where a broom or hopper gun texture sprayer can be used to provide broomed or spray pattern finishes in applications less than 1/16" thick.

FEATURES & BENEFITS:

- Can be pre-mixed with cement, sand and other additives for the convenience of just adding water
- Provides for easier handling and lower shipping cost
- Improves performance properties of mortar mixes such as adhesion, compressive strength, flexural strength, freeze-thaw resistance and weathering resistance
- Cement mixes applied with the addition of Concrete Polymer Powder do not require a curing agent
- Pre-blended with additional additives for increased workability and a lower water to cement ratio
- Good shelf life

CHEMICAL PROPERTIES:

	Result
Weight per Gallon	2.9 lbs
Density, g/ml	0.34
Ash Content	10.0
Volatile Organic Compounds	2%
Color	white free-flowing powder

TYPICAL PHYSICAL PROPERTIES:

	Test	Result
Bond Strength - 28 day (psi)	ASTM C-882	2100
tensile Strength - 28 day (psi)	ASTM C-496	430
Flexural Modulus - 7 day (psi)	ASTM C-348	1320
Compressive Strength - 28 day (psi min)	ASTM C-109	4637
Permeability, 28 day (Coulombs)		1535
Glass Transition - Tg (°C)	ASTM D-7028	6°

MOISTURE VAPOR TESTING: All concrete floors not poured over a proper moisture barrier are subject to possible moisture vapor transmission or hydrostatic pressure problems. These problems can cause a coating system to blister or fail. Before applying a coating system over a concrete floor which is on-grade or below grade, a moisture test is recommended to ensure that moisture content meets industry recommended standards.

MIXING INSTRUCTIONS: 4.5 lbs. of Concrete Solutions Concrete Polymer Powder and 1/2 gallon of water (or 4.3 lbs. of water) is equal to 1 gallon of Concrete Solutions Concrete "Liquid" Polymer. See Concrete Solutions Concrete Polymer Mixing and Coverage Charts for detailed formulas.

APPLICATION INSTRUCTIONS:

BOND COAT (or Resurfacer-RBM Bag Mix) - Applied in thin applications from 0 – 1/16" thick as a bond coat and resurfacing coat using a metal edge squeegee, available from Concrete Solutions. A hand trowel can also be used. Once the surface has been cleaned, crack repaired with the Concrete Solutions Crack Repair System and patched with a Polymer Concrete Patching Mix (if needed), the Bond Coat is then applied thin over the entire

CONCRETE SOLUTIONS® CONCRETE POLYMER POWDER (continued):

surface to cover all the repairs. It is used to provide a smooth finish and as a bond coat before applying a Polymer Concrete Texture Coat, Patching or 1/4" Stamping application. Available in 50 lb. bags called Resurfacer-RBM or mix your own. For more information see the Concrete Solutions Training Manual.

1/4" STAMPING - Applied 1/4" – 1/2" thick over existing concrete and other surfaces that are properly prepared. Apply over a wet squeegee/bond coat (Resurfacer) using a 3/8" gauge rake. Trowel smooth using a concrete fressno to remove the gauge rake lines. Allow to set up for 30 – 60 minutes until firm enough to stamp. When ready, spray on a thin coat of Liquid Release Agent and begin stamping to achieve the desired pattern and texture. See the 1/4" Stamping instruction booklet in the Concrete Solutions Training Manual for more detailed application instructions

SPRAY TEXTURE AND 1/8" STAMPED BORDERS - (Also known as Trowel Knockdown Texture) - Applied over an Concrete Solutions Bond Coat or Resurfacer using a hopper gun sprayer and then troweled flat after several minutes using a hand trowel, funny trowel or metal edge squeegee to create the desired texture. The mix design, air pressure of the hopper gun sprayer, tip size being used (sm., med. or lg.) and the way the material is sprayed and troweled will all determine the final texture. When dry to touch, two coats of Concrete Solutions Concrete Colorcoat is applied to achieve a uniform color. Used on pool decks, patios, driveways and walkways. The Spray Texture Mix is also used to create 1/16 – 1/8" thick decorative stamped border designs for the broom finish and spray texture applications. It can also be used to spray over paper or plastic stencils to create decorative patterns. [See Concrete Solutions Training Manual for more information.]

BROOM FINISH AND SWIRL TEXTURE - Applied over the Bond Coat (Resurfacer), when dry to touch, to provide a straight broom or swirl pattern texture. Same mix as the Bond Coat except a fine, medium or coarse bristle broom is used immediately behind the metal squeegee to leave the desired broom finish texture. Once dry, apply 2 coats of Concrete Solutions Concrete Colorcoat to achieve a uniform color. Popular on driveways, patios, pool decks, walkways, parking garages, etc. On driveways, it is recommended to apply Sealcoat 1000 as a topcoat over Concrete Colorcoat for extra stain resistance. For extra traction and slip resistance on steep driveways, make a coarser mix by replacing the #60 – 90 sand with #20 and 30 silica sand and use a coarser broom. Do a test area before doing the job to ensure proper traction and slip resistance. Available in 50 lb. bags called Resurfacer-RBM or mix your own using the formulas found on the Concrete Polymer Mixing and Coverage Charts in the Concrete Solutions Training Manual.

SUBSTRATES: Concrete, asphalt, wood, metal, tile and various types of foam

HOW SUPPLIED: It is available as a powder in 30 lb. bags. It is also available in pre-blended just-add-water bag mixes.

STORAGE: 70° – 80°F (21° – 27°C). Store in a dry place and do not stack more than six bags high.

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

Chemical systems require the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

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Rhino Linings Corporation
9747 Businesspark Avenue, San Diego, CA 92131
858-450-0441 • Fax 858-450-6881
1-800-422-2603
www.rhino linings.com

Concrete Solutions by Rhino Linings
7455 Carroll Road, San Diego, CA 92121
1-800-232-8311 • Fax 858-566-4346
www.concretesolutions.com