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POLYMER NATION CHEMICAL COMPANY, LLC

Setting the Standard

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TECHNICAL DATA SHEET: F-52 SL 28 URETHANE CONCRETE SLURRY OVERLAY

Product Overview

F-52 SL 28 is a revolutionary formulation that allows longer working time with a snap-cure. It combines our water-based urethane resin and aromatic hardener with our proprietary blend of portland cement, lime and fillers (PN 1352 S 28). It has been formulated to provide the highest degree of impact and thermal shock resistance of any urethane concrete on the market. Its low odor and easy application make it perfect for industrial and durable decorative applications.

Uses and Benefits

F-52 SL 28 is most often used as a self-priming, slurry broadcast flooring system. It is used to achieve 1/8" thickness in one pass or when a decorative broadcast element is to be included. F-52 SL 28 can be used as a primer when concrete floors exhibit high moisture transmission levels. It can also be applied to green concrete.

Limitations

Each mix will cover 45 sq. ft. at 1/8" theoretical coverage. A waste factor of 5% should be contemplated when mixing and installing. Ideal application temperatures to be between 50-80°F. Cooler temperatures will increase cure times. Warmer temperatures will decrease working and cure times. Verify that substrate temperature is above 5 degrees of dewpoint during application and cure of material to avoid a potential amine blush.

Surface Preparation

The preparation method for each project is determined by a full understanding of the substrate to be coated, the chemistry of the coating system being used, the coating system thickness, and numerous other factors. The coating installer should fully read and understand ICRI Guideline NO.03732 and OSHA 29 CFR 1926.1153 before starting preparatory work. The aim, of preparing a substrate for coating applications, is to roughen the surface, remove weak layers, contaminants, dirt, debris and present a solid, clean, dry substrate for the primer. If unsure as to the level of preparation needed contact Polymer Nation at Lab@polymerNation.com.

Mixing

A mixture consists of 1 gal. A, 0.75 gal B and 28 LB. of C (PN 1352 S 28). Combine part A and B into a single container, large enough to accept the entire kit (1 mix equals 3.8 gallons when Part C is added). Premix liquids at 350 RPM for 30-45 seconds using an appropriate mixing blade or mixing machine. Add Part C under agitation and mix for an additional 1-2 minutes

Application

Pour material on to floor and spread to desired thickness using a screed rake or notched squeegee. Once material has leveled, back roll with a spiked roller to aid in the release of trapped air. If a broadcast has been selected, begin broadcasting evenly across the floor, following the same order in which the slurry was installed. Whenever possible, work the shorter distance not the longer as this will help keep a fresh edge and make for easier blending. Temperature should be descending, not ascending during application and cure of slurry. This is critical whenever a broadcast will not be cast into the wet slurry. Recoat within 24 hours. Clean tools with a solvent similar to Denatured Alcohol or Acetone.

Technical Data

The data below was gathered at temperatures of 72-75°F and 30-50% RH

Packaging	1,262 Gallon kits
Mix Ratio by Kit	1 gal. A, 0.75 gal. B, 28 lbs. C
Mixed Viscosity	300-400 cP 25°C/77°F (A&B)
Gel Time	N/A
Dry to Touch	2 hours
Through Dry	4 hours
Dry to Walk	6 hours
Dry to Light Use	16-24 hours
Full Cure	7 days
Shore D Hardness	D70 @ 24 hours
Shore D Hardness	D78 @ 7 days
Gloss @ 60 Degree Angle	30-40
VOC's of Mixed Material	<50 g/l EPA Method 24
Color Scale	0.5-1.0 per ASTM D1500
Solids by Volume Mixed	> 97%
Application in inches	1/8" (approx.. 45 sq.ft./kit)
Available Colors	Natural, Tile Red, Light Gray, Medium Gray, Dark Gray, Black

PHYSICAL PROPERTIES
F-52 SL 28 URETHANE CONCRETE SLURRY

Description	Standard	Results
Tensile Strength	ASTM C307	1,400 psi
Moisture Absorption	ASTM C413	0.04%
Coefficient of Thermal Lineal Expansion	ASTM C531	2 x 10 to the 5th
Compressive Strength	ASTM C579	8,000 psi
Modulus of Elasticity	ASTM C580	N/A
Flexural Strength	ASTM C580	2,500 psi
Water Vapor Transmission	ASTM D1653	See ASTM D3010
Impact Resistance	ASTM D2794	>160 inch pounds The addition of PC 1244 drastically improves performance
Independent Certificate from third party testing agency	ASTM D3010	Breathable
Adhesion	ASTM D3359	N/A
Abrasion Resistance CS17 1000 g 1000cycles in g Loss	ASTM D4060	0.030g Loss (when higher abrasion resistance is required the addition of PC 1336 to the coating should be included)
Adhesion to Steel	ASTM D4541	N/A
Hiding Power	ASTM D5150	N/A
Flammability When Adhered to Concrete	ASTM D635	Self-Extinguishing
Adhesion to Concrete	ASTM D7234	>450 Substrate failure
Coefficient of Friction Dry Ave. three tests	NFSI B101.0	0.75
Coefficient of Friction Wet Ave. three tests	NFSI B101.1	0.7
Accelerated Weathering Testing	ASTM G154	Significant yellowing

* Dispose of material, containers, solvents, etc., per Federal, State and local guideline, rules and laws.
* Store material between 60-80 degrees F in a protected dry location.

Test data has been gathered from testing conducted by independent, internal and third party testing. The best way to compare coating performance is by head-to-head independent testing as this removes the numerous variables found between testing standards, equipment and testing agencies.