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# POLYMER NATION CHEMICAL COMPANY, LLC

*Setting the Standard*

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## TECHNICAL DATA SHEET: F-11 SL CLEAR EPOXY SLURRY

### Product Overview

F-11 SL combines our clear, nonylphenol-free, epoxy resin, our blended cycloaliphatic curing agent and our Slurry Aggregate PN 1360 to create an easy-to-use slurry material. This mixture allows the installer to create a high-build, epoxy flooring system in a shorter amount of time than double broadcasting the floor. The cured material has high compressive strength (three times that of concrete), great impact resistance and a broad range of resistance to chemical attack. It is virtually odor-free.

### Uses and Benefits

F-11 SL is primarily used as a fast-setting epoxy overlay to protect and/or repair concrete when sloping is not required. On solid concrete, the system is self-priming and with the appropriate conditions and a skilled installer it can be left as a high-build, single step flooring system. When conditions or skill do not allow a one step process, a broadcast of select aggregates and fillers can be used to help level the floor, release trapped air and add a decorative flair.

### Limitations

Each mix of F-11 SL will cover 66 sq. ft. at 1/8" theoretical coverage. A waste factor of 10-15% should be contemplated when mixing and installing. Ideal application temperatures to be between 60-90°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](mailto:Lab@polymerNation.com).

### Mixing

A mixture consists of 2 gal A, 1 gal B and 50 LB. of C (PN 1360). Combine part A and B into a single container, large enough to accept the entire kit (1 mix equals 6.5 gallons when Part C is added). Premix liquids at 350 RPM for 1 minute using an appropriate mixing blade or mixing machine. Pour Part C into the mixed resin and continue mixing until a homogenous slurry is achieved (2-3 minutes usually), making sure not to introduce excessive air into the solution.

### 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 Xylene or Acetone.

### Technical Data

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

Packaging	3 Gal Kit + aggregate
Mix Ratio by Volume	2:1 plus aggregate
Mixed Viscosity	350-450 cP 25°C/77°F (A&B)
Gel Time	15 minutes
Dry to Touch	2 hours
Through Dry	4 hours
Dry to Walk	6 hours
Dry to Light Use	12 hours
Full Cure	5-7 days
Shore D Hardness	D65 @ 24 hours
Shore D Hardness	D78 @ 7 days
Gloss @ 60 Degree Angle	25-30
VOC's of Mixed Material	<50 g/l EPA Method 24
Color Scale	0.5-1.0 per ASTM D1500
Solids by Volume Mixed	100%
Application in inches	1/8" (66 sq.ft./kit)
Available Colors	Clear & Color Packs

## PHYSICAL PROPERTIES F-11 SL CLEAR EPOXY SLURRY

Description	Standard	Results
Tensile Strength	ASTM C307	2,870 psi
Moisture Absorption	ASTM C413	<.2 weight increase
Coefficient of Thermal Lineal Expansion	ASTM C531	24.5 x 10 <sup>-6</sup> in/in/°F
Compressive Strength	ASTM C579	15,200 psi
Modulus of Elasticity	ASTM C580	1,300 psi
Flexural Strength	ASTM C580	5,000 psi
Water Vapor Transmission	ASTM D1653	See ASTM D3010
Impact Resistance	ASTM D2794	>160 inch pounds
Independent Certificate from third party testing agency	ASTM D3010	N/A
Adhesion	ASTM D3359	N/A
Abrasion Resistance CS17 1000 g 1000cycles in g Loss	ASTM D4060	0.083g 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	N/A

\* 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.

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