



## **Polymer Nation – PolyGuard 110**

*Technical Data Sheets*

**Primer: P-30 Epoxy Grouting/Primer (pigmented)**

**Wall Body: W-80 Epoxy Coating (pigmented)**

**Wear: W-80 Epoxy Coating (pigmented)**



Made in the USA with domestic  
and imported ingredients.

# POLYMER NATION CHEMICAL COMPANY, LLC

*Setting the Standard*

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405 Oakwood Ave  
Waukegan, IL 60085

## TECHNICAL DATA SHEET: P-30 EPOXY GROUTING/PRIMER

### Product Overview

P-30 consist of a high viscosity, nonylphenol-free, epoxy resin and a thickened, cycloaliphatic amine reactant. This combination achieves a rheology that makes it easy to spread but also fast to return to its resting state, especially in vertical applications.

### Uses and Benefits

P-30 is most often used to fill porous surfaces such as trowel applied epoxy flooring and coving and as a concrete block filler. It can also be used as a troweling paste to assist in the application of aggregate-filled mortar on coving and vertical substrates.

### Limitations

P-30 is designed to be applied between 12-20 mils. It is not intended to be used as a finish coat as it will amber. 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. 310.2R-2013 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

It is always recommended to mix the entire kit, whenever possible, to avoid off-ratio mixtures. Mix ratio is 2 parts P-30 Part A to 1 part P-30 Part B. Combine all of part A and B into a single container, large enough to except the entire kit. Mix using a 350 RPM mixer using an appropriate mixing blade for 2 - 3 minutes making sure to not introduce excessive air into the material.

### Application

If using as a block filler- pour content into a large rolling pan and roll with a 9" wide, 5/8" nap roller cover. If using as a grout coat, pour the entire content from the container onto

the floor and using a non-marking, flat squeegee. Apply even pressure to force material into the pores and cavities being careful not to leave tails that will need to be removed once cured. 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 Gallon kits
Mix Ratio by Volume	2:1
Mixed Viscosity	4500 +/- 500 cP 25°C/77°F
Gel Time	45 minutes
Dry to Touch	4-6 hours
Through Dry	8-10 hours
Dry to Walk	12-16 hours
Dry to Light Use	24 hours
Full Cure	7 days
Shore D Hardness	D65 @ 24 hours
Shore D Hardness	D78 @ 7 days
Gloss @ 60 Degree Angle	60-70
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 Mils	12-20 (80 – 135 sq.ft./gal.)
Available Colors	Clear

## PHYSICAL PROPERTIES P-30 EPOXY GROUTING/PRIMER

Description	Standard	Results
Tensile Strength	ASTM C307	10,400 psi
Moisture Absorption	ASTM C413	<.2 weight increase
Coefficient of Thermal Lineal Expansion	ASTM C531	15-17 x 10-6 27-30 x 10-6
Compressive Strength	ASTM C579	11,700 psi
Modulus of Elasticity	ASTM C580	N/A
Flexural Strength	ASTM C580	5,550 psi
Water Vapor Transmission	ASTM D1653	See ASTM D3010
Impact Resistance	ASTM D2794	>96 inch pounds
Independent Certificate from third party testing agency	ASTM D3010	N/A
Adhesion	ASTM D3359	5A
Abrasion Resistance CS17 1000 g 1000cycles in g Loss	ASTM D4060	0.073g Loss (when higher abrasion resistance is required the addition of PC 1336 to the coating should be included)
Adhesion to Steel	ASTM D4541	>1,000 psi
Hiding Power	ASTM D5150	2-5/225
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	N/A
Coefficient of Friction Wet Ave. three tests	NFSI B101.1	N/A
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.

The information here is general information to help our customers determine whether our products suit their specific applications. Our products are intended for sale to commercial and industrial customers. ***We require that customers inspect and test our products before use to satisfy themselves as to the content and suitability for the applications they intend to use our products.*** Nothing herein shall constitute any warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose, nor is any protection from any law or patent to be inferred. The exclusive remedy for all proven claims is the replacement of our materials, and we shall not be liable for incidental or consequential damages. Polymer Nation Chemical Company LLC, 405 Oakwood Ave. Waukegan, IL 60085. All rights reserved.



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## TECHNICAL DATA SHEET: W-80 EPOXY PIGMENTED COATING

### Product Overview

W-80 consists of a pigmented, high viscosity, nonylphenol-free, epoxy resin and a thickened, cycloaliphatic amine reactant. This combination achieves a rheology that makes it easy to spread but also fast to return to its resting state.

### Uses and Benefits

W-80 is most often used to coat vertical substrates that require a high-build, high-performance, material that will not run or sag. It can also be used as a 1-coat line striping material, pigmented grout coat on aggregate-filled mortar and coving and as a base and saturant coat for imbedding fiberglass and carbon-fiber sheeting.

### Limitations

W-80 is designed to be applied between 8-20 mils depending on the porosity of substrate. 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. 310.2R-2013 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

It is always recommended to mix the entire kit, whenever possible, to avoid off-ratio mixtures. Mix ratio is 2 parts W-80 Part A to 1 part W-80 Part B. Combine all of part A and B into a single container, large enough to accept the entire kit. Mix at 350 RPM for 2-3 minutes using an appropriate mixing blade. Make sure to scrape any unmixed material off the sides of the mix vessel. Take care not to introduce excessive air during mixing.

### Application

Pour mixed content into a large rolling pan, if rolling vertically, and roll with a 9" wide, 5/8" nap roller cover. If using as a floor coating or grout-coat, pour material onto the floor and

squeegee, making sure to apply even pressure so as to force material into the pores and cavities. Backroll as needed to even out application. 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	1.5, 3 Gallon kits
Mix Ratio by Volume	2:1
Mixed Viscosity	4800 cP 25°C/77°F
Working Time	30-45 minutes
Dry to Touch	5 hours
Through Dry	10 hours
Dry to Walk	12 hours
Dry to Light Use	24 hours
Full Cure	7 days
Shore D Hardness	D65 @ 24 hours
Shore D Hardness	D78 @ 7 days
Gloss @ 60 Degree Angle	85-90
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 Mils	8-20 (80 – 200 sq.ft./gal.)
Available Colors	White, Light Gray and Warm Sun, Safety Yellow

## PHYSICAL PROPERTIES W-80 EPOXY PIGMENTED COATING

Description	Standard	Results
Tensile Strength	ASTM C307	10,400 psi
Moisture Absorption	ASTM C413	<.2 weight increase
Coefficient of Thermal Lineal Expansion	ASTM C531	15-17 x 10-6 27-30 x 10-6
Compressive Strength	ASTM C579	11,700 psi
Modulus of Elasticity	ASTM C580	N/A
Flexural Strength	ASTM C580	5,550 psi
Water Vapor Transmission	ASTM D1653	See ASTM D3010
Impact Resistance	ASTM D2794	>96 inch pounds
Independent Certificate from third party testing agency	ASTM D3010	N/A
Adhesion	ASTM D3359	5A
Abrasion Resistance CS17 1000 g 1000cycles in g Loss	ASTM D4060	0.073g Loss (when higher abrasion resistance is required the addition of PC 1336 to the coating should be included)
Adhesion to Steel	ASTM D4541	>1,000 psi
Hiding Power	ASTM D5150	2-5/225
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	N/A
Coefficient of Friction Wet Ave. three tests	NFSI B101.1	N/A
Accelerated Weathering Testing	ASTM G154	Moderate yellowing

\* Dispose of material, containers, solvents, etc., per Federal, State and local guidelines, rules and laws.

\* Store material between 60-80 degrees F in a protected dry location.

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