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POLYMER NATION CHEMICAL COMPANY, LLC

Setting the Standard

847-774-5038 | www.polymernation.com | sales@polymernation.com

405 Oakwood Ave
Waukegan, IL 60085

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.

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
Gel Time	50 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.

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.

Revised: 3/25/25