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POLYMER NATION CHEMICAL COMPANY, LLC

Setting the Standard

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TECHNICAL DATA SHEET: W-31 EPOXY COVE GEL

Product Overview

W-31 consist of a high viscosity, nonylphenol-free, epoxy resin, a thickened, cycloaliphatic amine reactant, and a specialty trowel aggregate blend. This combination achieves a rheology and consistency that makes it easy to trowel but also fast to return to its resting state, especially in vertical applications.

Uses and Benefits

W-31 is most often used in application as a cove base around the perimeter of an installation to prevent damage and/or contamination around the base of walls as well as provide containment where needed. It provides a seamless transition from the floor to wall.

Limitations

W-31 is designed to be applied between 1/8" to 1/4" thickness; this is application dependent. 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.

Mixing

It is always recommended to mix the entire kit, whenever possible, to avoid off-ratio mixtures.
Mix ratio is 2 parts W-31 Part A (0.5 gal.) to 1 part W-31 Part B (0.25 gal.) to ***45 lbs.*** **PN 1324 trowel aggregate** or ***50 lbs.*** **PN 1321 L decorative quartz trowel aggregate**. 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 1 - 2 minutes making sure to not introduce excessive air into the material; then, under mixing, add desired trowel aggregate (PN 1324 or PN 1321L).

Technical Data

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

Packaging	3 Quart kits (Liquids - 0.5 gal A, 0.25 gal B)
Mix Ratio by Volume	2:1 (liquids)
Mixed Viscosity	4500 cP 25°C/77°F (liquids)
Working Time	25-35 minutes
Dry to Touch	6-8 hours
Through Dry	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	See chart – Page 2
Available Colors	Clear & Color Packs

Application

Before applying W-31 to a vertical substrate, tape off the area of the wall base which will receive the W-31 cove gel and then prime the surface to be coated with a thin layer (6-10 mils) of any of the following PN products: **P-30**, **P-99**, or **F-01** (standard or fast set). This will aid the 'hang' of W-31 during initial placement and smoothing. **While the prime coat is still wet and/or tacky**, begin applying the mixed W-31 epoxy cove gel to the base of the wall with appropriate tooling (margin trowel etc.). Once W-31 has been placed, smooth and finish with a cove trowel. Pull tape within 30 minutes of placing W-31. Use C-99 for trowel lubricant if desired. Recoat within 24 hours. Clean tools with a solvent similar to Xylene or Acetone.

W-31 Epoxy Cove Gel Kit Coverages

Base	Linear Feet (+/- 5%)
2” Cant	62 feet
4” Cove with 1” radius (see Note)	36 feet
6” Cove with 1” radius (see Note)	32 feet

W-31 Kit
A – 0.5 gal
B – 0.25 gal
C – 45 lbs. PN 1324 Trowel Aggregate

Note: Vertical (non-rounded) portion of cove base was between 1/8” – 1/4” thickness

PHYSICAL PROPERTIES
W-31 EPOXY COVE GEL

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 (liquids)	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 (liquids)	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.

Revised: 6/25/25