Polymer Nation Chemical Company, LLC
405 Oakwood Ave, Waukegan, IL 60085 | (847) 774-5038
polymernation.com | sales@polymernation.com

WALL PRODUCTS

W-22

TECHNICAL DATA SHEET

COMPONENTS	SOLIDS	VOC	MIX RATIO
1	39%	127 g/L	Single component, pre-catalyzed

DESCRIPTION

W-22 is a single-component, pre-catalyzed waterborne acrylic epoxy enamel for interior surfaces that see hard use and frequent cleaning. The acrylic and epoxy resins combine to give hardness, adhesion and stain resistance normally associated with two-component waterborne epoxies, without the pot life, the field mixing or the disposal of unused mixed material.

Polymer Nation rates W-22 as a performance equal to MPI #215, a two-component waterborne epoxy, delivered as a one-component coating, and it is approved under MPI #153 and #163 at MPI Gloss Level 3.

RECOMMENDED USES

Healthcare: hospitals, clinics, patient rooms and corridors. Education and childcare: schools, day cares, churches. Food service: cafeterias, institutional dining, kitchen cooking areas, USDA inspected facilities. Public restrooms and high-traffic corridors. Repaint over sound existing coatings, solvent-borne or waterborne, after a compatibility check.

SUBSTRATES

Interior only, properly prepared and primed: steel, galvanized metal, aluminum, concrete and masonry, CMU, cement board, plaster, drywall, wood and ceramic tile. Metal: prime with a compatible metal primer. Concrete, CMU and masonry: prime with P-02. Drywall: prime with P-08.

LIMITATIONS

Interior use only. Not for floors. Not for continuously wet or submerged surfaces: tubs, sinks, showers, countertops. Supplied ready to use; do not reduce, as thinning degrades film performance. Apply at 50°F–120°F (air, surface and material), at least 5°F above the dew point. Relative humidity must not exceed 85%. PROTECT FROM FREEZING: this is a waterborne coating; a frozen container is scrap. Dark colors cure more slowly than light colors; allow extra time before recoat and before return to service.

ADVANTAGES

MPI #215 Performance, One Component
Two-component waterborne epoxy durability without pot life, field mixing or mixed-material disposal.

Four-Day Recoat Window
No sanding needed for four days.

Dry to Touch in 30–60 Minutes
Short downtime in occupied hospitals, schools and kitchens.

Under 150 g/L VOC
Green Seal GS-11 compliant for interior non-flat, with soap-and-water clean-up.

Color Variety
Wide range of color options for general use areas.

SURFACE PREPARATION

Read and understand ICRI Guideline No. 310.2R-2013 and OSHA 29 CFR 1926.1153 before starting preparatory work. All substrates must be clean, dry and sound.

Metal (prime with a compatible metal primer): Solvent or detergent clean per SSPC-SP1 before abrasive blasting or mechanical preparation. Blast to SSPC-SP6 commercial or SP10 near-white with a 2–3.5 mil anchor profile per ASTM D4417, or power tool clean per SSPC-SP3. On previously painted surfaces, solvent clean, remove loose paint, feather edges and run a compatibility test. Galvanized: SSPC-SP1, then mechanically etch to a clean, lightly abraded surface. Verify soluble salts by Bresle method per ISO 8502-6/-9 in active industrial facilities, to 7 µg/cm^2 chloride equivalent. Test dew point and surface temperature per ASTM D3276. ASTM D4940 has been dropped; it measures the cleanliness of blasting abrasive, not surface extracts.

Concrete, CMU & Cement Board (prime with P-02 / P-08): Concrete and mortar: minimum 28-day cure; abrade to CSP 2–3 per ICRI Guideline No. 310.2R-2013; fill bug holes and honeycombing with a patching compound before coating. CMU, by the masonry contractor: joints struck clean and filled tight, spatter and protruding edges removed, rough edges ground smooth, units cleaned per Division 4. Cement board: remove loose coating with random orbital sanders, patch, and fill and tape all joints.

Drywall, Plaster and Wood (prime drywall with P-08): sound, dry, sanded smooth and dust-free.

Concrete Moisture Concerns: Excess moisture in concrete can cause discoloration, inhibited polymerization and delamination of non-permeable resinous systems. Moisture originates from surface moisture present during application, moisture migrating from within the slab, or a continuous external source in contact with the concrete. Perform the following prior to application: ASTM F2170 (in-situ relative humidity, 72 hr equilibration) and ASTM D4263 (plastic sheet method, 16 hr minimum).

MIXING

W-22 is supplied ready to use. Agitate thoroughly, mechanically or by hand, before and during application, without whipping air into the material. Do not reduce.

APPLICATION

Spray with airless equipment and back-roll with an appropriate sleeve. Apply two coats over primer at 4–6 mils wet each, for 1.5–2.0 mils dry per coat and 3–4 mils dry total. The spray settings below are a starting point; pressure and tip may need adjusting, and equivalent equipment may be substituted.

Recoat without sanding for up to four days. Past four days, sand before recoating. Dark colors cure more slowly than light colors; allow extra time before recoat and before returning the space to service. Wash spills, hands and tools with soap and warm water immediately after use, then flush spray equipment with a compliant solvent so it does not rust. Do not thin W-22. Clean tools with water while the material is still wet.

APPLICATION CONDITIONS & TOOLS

Ambient Temperature	Min 50°F / Max 120°F
Substrate Temperature	At least 5°F above dew point
Airless Spray: Fluid Tip	.013–.021
Airless Spray: Pump	20:1
Airless Spray: Hose	At least 3/8" I.D., 100 ft +
Roller Cover	3/8"–1/2" woven, shed-resistant
Brush	3" chip, for cutting in
Tool Cleanup	Soap and warm water

COMPONENTS

COMING SOON

GENERAL PRODUCT INFORMATION

Chemistry	Wall Products
Color / Finish	Polymer Nation Colors
Number of Components	1
Solids by Volume	39%
VOC (Mixed)	127 g/L
Mix Ratio	Single component, pre-catalyzed
Mixed Viscosity	100–110 KU (ASTM D2196)
Application Temperature	50°F–120°F; at least 5°F above dew point; RH 85% max

PHYSICAL PROPERTIES

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

Hardness	H (pencil, ASTM D3363)	
Abrasion — Taber CS-17	29.8 mg loss (CS-17 wheel, 1,000 g load)	ASTM D4060
Gloss @ 60°	Eggshell, MPI Gloss Level 3	
Bond Strength	>400 psi, substrate failure	ASTM D4541

CURE SCHEDULE

Dry to Touch	30–60 minutes

COVERAGE & PACKAGING

Coverage Rate	267–400 ft^2/gal at 4–6 mils wet (theoretical; add 10–15% for surface profile, porosity and waste)
Application Thickness	1.5–2 mils dry per coat; 3–4 mils dry total (two coats)
Recoat Window	Up to 4 days without sanding
Packaging	1 & 5 Gallon Kits (Made to order)

SPECIFICATIONS & APPROVALS

MPI #153	Interior/Exterior WB Light Industrial
MPI #163	Gloss Level 3, eggshell
MPI #215	2K WB epoxy, performance equal
Green Seal GS-11	Interior non-flat, <=150 g/L
TT-P-1511B / TT-P-1510A	
TT-P-1984 · TT-E-2784	

ANTIMICROBIAL OPTION

An antimicrobial agent can be added to W-22 for environments needing added protection.

RELATED DOCUMENTS

W-22 Safety Data Sheet (SDS)
Polymer Nation Solution Guide
Polymer Nation Wall system data sheets
Polymer Nation Color Card
Guide Specification, CSI Section 09 96 59, Specialty Coatings
Detail Drawings Library

STORAGE, HANDLING & SAFETY

Store between 60°F and 80°F in a protected, dry location. Shelf life 12 months in unopened original containers. Dispose of material, containers and solvents per federal, state and local guidelines, rules and laws. Before using, carefully read the CAUTIONS on the product label. Refer to the Safety Data Sheet (SDS) before use. FOR PROFESSIONAL USE ONLY. Published technical data and instructions are subject to change without notice; contact your Polymer Nation representative for additional technical data and instructions. Made in the USA with domestic and imported ingredients.

TEST DATA

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.

TYPICAL VALUES

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.