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# POLYMER NATION CHEMICAL COMPANY, LLC

*Setting the Standard*

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## TECHNICAL DATA SHEET: P-04 1K ACRYLIC DTM

### Product Overview

P-04 is a revolutionary, single component, acrylic DTM. It has excellent adhesion to steel, zinc, aluminum and a variety of metal substrates. It provides corrosion protection as a barrier coating and provides fast dry and early hardness properties.

### Uses and Benefits

P-04 is most often used as shop primer but can also be used as a multi-layer coating on metal substrates. It has good UV resistance, compared with most epoxies and has very low odor. It is easy to apply and provides an excellent base layer for subsequent coatings of all types.

### Limitations

P-04 is designed to be applied at 6-10 mils as a floor primer, 6-8 mils as a body coat / topcoat. 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 blush or condensation.

### 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

Stir entire container at 350 RPM for 2-3 minutes using an appropriate mixing blade and making sure not to introduce excessive air into the solution.

### Application

Apply using airless equipment, brush and roll techniques. 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	5, 55 Gallon kits
Mix Ratio by Volume	N/A
Mixed Viscosity	200 cP 25°C/77°F
Gel Time	N/A
Dry to Touch	30 minutes
Through Dry	1 hour
Dry to Walk	2 hours
Dry to Light Use	24 hours
Full Cure	7 days
Pendulum (König) Hardness	20 @ 24 hours
Pendulum (König) Hardness	40 @ 7 days
Gloss @ 60 Degree Angle	55-60
VOC's of Mixed Material	<50 g/l EPA Method 24
Color Scale	N/A
Solids by Volume Mixed	58%
Application in Mils	6-10 (160 – 270 sq.ft./gal.)
Available Colors	White

## PHYSICAL PROPERTIES P-04 1K ACRYLIC DTM

Description	Standard	Results
Tensile Strength	ASTM C307	N/A
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	N/A
Modulus of Elasticity	ASTM C580	N/A
Flexural Strength	ASTM C580	N/A
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	5A
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	>400 psi
Hiding Power	ASTM D5150	2-5/300
Flammability When Adhered to Concrete	ASTM D635	Self-Extinguishing
Adhesion to Concrete	ASTM D7234	>300
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	Excellent non-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.

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