



General Industrial Coatings

CC-E14A

POLANE® 700T Water Reducible Enamel

Black.....F63B520 Clear.....F63V521
White.....F63W523 Custom Blend Series.....F63WX

DESCRIPTION

POLANE® 700T Water Reducible Enamel is a phthalate free, one component, water reducible polyurethane acrylic enamel that is intended for the Business Machine and Electronic Cabinetry markets. In these markets, as smooth or texture coatings on structural foam, injection molded plastic or treated steel, Polane 700T provides performance properties similar to two component solvent-based polyurethanes.

Advantages:

- VOC* as packaged, <2.3 lbs/gal; 275 g/L
- High Quality; meets the performance requirements of the Business Machine & Electronic Cabinetry markets
- No free isocyanate health hazard; the urethane is pre-reacted
- Water based, no flash point & no fire hazard
- Performance similar to solvent-based polyurethanes in these markets
- Improved performance versus acrylic latex coatings
- One package system - no catalyst is required
- Excellent hardness
- Excellent resistance to color change as tested on HP-UV cabinet
- Available in a broad range of colors
- Air dry or force dry; low energy cure
- Good solvent and chemical resistance
- Phthalate free
- Designed to be RoHS compliant
- Free of chromate hazards

*VOC Compliance limits vary from state to state; please consult local Air Quality rules and regulations.

An Environmental Data Sheet is available from your local Sherwin-Williams® facility or at www.PaintDocs.Com.

CHARACTERISTICS

60° Gloss:
Black & White 35-40
Clear 45-60
May be adjusted lower with D64F505

Volume Solids (varies by color): 37-40% ± 1%

Viscosity: 5,500-6,500 cps
(Brookfield® RVT, #4 spindle @ 20 RPM, 77° F)

Recommended Film Thickness:
Mils Wet 3.0-4.0
Mils Dry 1.2-1.6

Spreading Rate (no application loss):
370-535 ft²/gal at 1.2-1.6 mils DFT

Cure:
Air Dry or Force Dry 30 minutes 140° F

Good air movement and humidity control are necessary for proper drying of water reducible coatings.

Flash 10-15 minutes between smooth and texture coats.

Substrate Disclaimer: Curing of coating at temperatures higher than the heat distortion parameters of the substrate may cause substrate issues.

Drying: (1.2 mils at 77° F, 50% RH)
To Touch 20-30 minutes
Tack Free 30-40 minutes
To Handle 40-50 minutes
To Pack Overnight

Flash Point (Setaflash®): 499° F

Air Quality Data:
Non-photochemically Reactive
Volatile Organic Compounds (VOC) <2.3 lbs/gal
Theoretical as packaged, 275 g/L
less water & exempt solvents.

Recommended Storage:
Freeze hazard, freezing may destroy product. Store inside at 40-100° F, maintain sealed container

Package Life: 2 years, unopened

pH: 8.0-8.5

SPECIFICATIONS

General: All substrates should be free of mold release, oil, grease, dirt, fingerprints, drawing compounds, surface passivation treatments and any other contaminants to ensure optimum adhesion and coating performance. Consult Metal Preparation brochure CC-T1 for additional details.

Aluminum: If untreated, prime with RoHS Compliant Wash Primer, P60G10 or Industrial Wash Primer, P60G2 or Kem Aqua® Wash Primer, E61G522.

Galvanized Steel: If untreated, prime with RoHS Compliant Wash Primer, P60G10 or Industrial Wash Primer, P60G2 or Kem Aqua Wash Primer, E61G522.

Plastic: Due to the diverse nature of plastic substrates, a coating or coating system must be tested for acceptable adhesion to the substrate prior to use in production. Reground and recycled plastics along with various fire retardants, flowing agents, mold release agents, and foaming/blowing agents will affect coating adhesion. Wash the surface with isopropyl alcohol. The coating can be applied directly to most plastic surfaces. If needed, test with Kem Aqua Bonding Primer E61W525, Polane W2 Primer, E61A516, or Kem Aqua 65P SprayFil, D61H565. Consult your Sherwin-Williams representative for system recommendations.

Steel or Iron: Remove rust, mill scale, and oxidation products. For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection. Where a primer is needed use Kem Aqua Wash Primer, E61G522 or Polane W2 Primer, E61A516.

Testing: The information, data, and recommendations set forth in this Product Data Sheet are based upon test results believed to be reliable. However, due to the wide variety of substrates, substrate properties, surface preparation methods, equipment and tools, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.

APPLICATION

Typical Setups

Reduction: To ensure optimal coating performance and stability, it is recommended to use deionized water for reduction.

Application Methods:

Base coats/smooth coats can be applied using conventional, airless, air assisted airless, HVLP, or electrostatic methods.

Texture coats must be applied using conventional spray.

Allow 10-15 minutes flash off of basecoat before applying texture coat.

Conventional Spray:

Smooth Coat

Air Pressure	45-60 psi
Fluid Pressure	10-12 psi
Tip	0.055-0.070 in.
Reducer	Water
Reduction Rate (by volume)	10-25%

Texture Coat

Air Pressure	25-35 psi
Fluid Pressure	5-15 psi
Tip	0.055-0.070 in.
Reducer	Water
Reduction Rate (by volume)	0-10%

Over-reduction will give a poor texture profile and appearance. The texture pattern is dependent on equipment set up, paint viscosity and operator technique.

HVLP Spray:

Smooth Coat

Atomizing Air Pressure	Max 10 psi at cap
Fluid Pressure	6-10 psi
Tip	0.055-0.070 in.
Reducer	Water
Reduction Rate (by volume)	10-25%

Texture Coat

Atomizing Air Pressure	Max 4-8 psi at cap
Fluid Pressure	6-15 psi
Tip	0.055-0.070 in.
Reducer	Water
Reduction Rate (by volume)	0-10%

Equipment/application guidelines are only guidelines and individual application & process parameters will dictate exact requirements.

Cleanup: Use water followed by a dilute blend of water and ammonia as soon as possible. For dried coating on equipment, use MIBK. Follow manufacturer's safety recommendations when using any solvent.

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ADDITIONAL INFORMATION

1. Keep container closed to prevent skinning of this fast dry coating. Filtering may be required.
2. Product is thixotropic. Do not use viscosity cup to measure viscosity. Do not reduce over 25% for smooth coat or 10% for texture coat.
3. Water reducible coatings should be applied at high viscosity. They atomize very easily at higher viscosity.
4. A minimum of 1.1 mils dry film per coat is required for good adhesion and film integrity.
5. Some substrates may show lower pencil hardness when fully dried. This may be due to adhesion, substrate profile, and/or substrate cleaning/pretreatment issues. Higher film thickness may also give lower pencil hardness.
6. For optimum hardness of films up to 2 mils DFT, allow 2-4 weeks of air drying. Heavier DFT films may require 6-8 weeks. Optimum hardness of force dried films is attained after 48 hours of additional air drying.
7. Do not use Butyl Cellosolve® or other cosolvents; they are incompatible with Polane 700T.
8. Do not use alkyd based primers under Polane 700T coatings.
9. Products should be applied at temperatures above 50° F.
10. Do not package Polane 700T coated products in air-tight plastic bags unless completely cured. Since Polane enamels continue to cure for several weeks, buildup of organic solvents and reaction by-products could cause improper cure and adhesion failure during use.
11. Compatible with Kem Aqua® colorants. Maximum colorant tint load is 8 ounces per gallon in the F63V521 and 8 ounces per gallon in the F63W523.

Stain Resistance

30 Minute Spot Test

Coca-Cola®	Excellent
Coffee	Excellent
Gasoline	Excellent
Ketchup	Excellent
Lipstick	Excellent
Motor oil	Excellent
Vaseline®	Excellent

Chemical Resistance

30 Minute Spot Test & 1 Hour Recovery

Ammonia	Excellent
Clorox Formula 409®	Excellent
Ethyl Acetate	Good
1 N H ₂ SO ₄	Excellent
10% HCl	Excellent
Isopropanol	Good
Ivory® Liquid	Excellent
MEK	Good
10% NaOH	Excellent
5% Tide® solution	Excellent
Toluene	Good

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Performance Tests*

Substrate:	24 gauge Bonderite® 1000 P99X Cold rolled steel panels
DFT:	1.5 mils
Cure:	30 mins. @ 140° F
Post-Cure:	48 hours air dry

Salt Spray Resistance (ASTM B117)	48-72 hours
Humidity Resistance (ASTM D1735)	100 hours
Flexibility (ASTM D522)	Pass, 1/8 in Impact Resistance, Reverse (ASTM D2794)
No Fracture	75 in lb
No Tape Pick Off	>120 in lb
Pencil Hardness (ASTM D3363)	HB-F
Adhesion (ASTM D3359)	Excellent (5B)
Taber Abrasion (ASTM 4060)	<75 mg 1000 cycles, CS17 wheel, 1000 g load
Freeze/Thaw Resistance	2 cycles
HP-UV	350 hours, <2.0 ΔE (FMC-2)
MEK Double Rubs (100)	Slight Burnishing (ASTM D5402)

*Performance test results may vary depending on dry film thickness, substrate tested and post-cure duration.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION ONLY

Thoroughly review the product label and Safety Data Sheet (SDS) for safety information and cautions prior to using this product.

To obtain the most current version of the Environmental Data Sheet (EDS), Product Data Sheet (PDS), or Safety Data Sheet (SDS) please visit your local Sherwin-Williams facility or www.PaintDocs.Com.

Please direct any questions or comments to your local Sherwin-Williams facility.

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