POLANE® 700T Water Reducible Enamel

Black F63B520
Clear F63V521
White F63W522

DESCRIPTION

POLANE® 700T Water Reducible Enamel is a low VOC, one component water reducible, polyurethane-acrylic enamel intended for the Business Machine and Electronic Cabinetry market. As a smooth or texture coating system, on structural foam or injection molded plastic or treated steel, it provides performance properties similar to two component solvent based polyurethanes in these markets.

Advantages:

- VOC of less than 2.3 pounds/gallon at application
- Volatile organic emissions of less than 1.0 pounds/gallon
- High Quality - meets the performance requirements of the Business Machine/ Electronic Cabinetry market
- No free isocyanate health hazard - urethane is pre-reacted
- Water Based - No flash point - No fire hazard
- Performance similar to solvent based polyurethanes in these markets
- Improved performance over acrylic latex coatings
- One Package - no catalyst
- Excellent hardness
- Broad color range available through custom color mixing.
- Air dry or force dry - low energy cure
- Free of lead hazards as packaged in compliance with Consumer Product Safety Commission's (CPSC) 16CFR Chapter II: Subchapter B, part 1303
- Good solvent and chemical resistance
- Reduced with water and clean up with water means cost savings for solvent and insurance, lower odors and improved working conditions.
- Excellent resistance to color change as tested on HP-UV cabinet
- Low HAPS solvent content

CHARACTERISTICS

Gloss: 35-40 units
may be adjusted lower with D64F505
Volume Solids: 37-40 ± 1%
varies by color
Viscosity:
Brookfield #4 Spindle, RVT, 20 RPM
5500-6500 cps
Recommended film thickness:

Mils Wet	3.0 - 4.0
Mils Dry	1.2 - 1.6

Spreading Rate (no application loss)
360-548 sq ft/gal @ 1.2-1.6 mil dft
Drying (1.2 mils dft, 77°F, 50% RH):

To Touch:	20-30 minutes
Tack Free:	30-40 minutes
To Handle:	40-50 minutes
To Pack:	overnight
Force Dry:	30 minutes at 140°F

Good air movement and humidity control is necessary for proper drying of water reducible coatings.
Flash 10-15 minutes between smooth and texture coats.

Flash Point: none, Seta Flash
Package Life: 1 year, unopened
pH: 8.2 - 8.7

Air Quality Data:
Non-photochemically reactive
Volatile Organic Compounds (VOC)
as packaged, maximum
2.3 lb/gal, 275 g/L
Volatile Organic Emissions
as packaged, maximum
1.0 lb/gal, 120 g/L

An Environmental Data Sheet is available from your local Sherwin-Williams facility.

SPECIFICATIONS

General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.
Aluminum: Prime with Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G520.
Galvanized Steel: Prime with Industrial Wash Primer, P60G2, or Kem Aqua Wash Primer, E61G520.
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 W_2 Primer, E61AC514, or Kem Aqua 65P SprayFil. 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 Polane W_2 Primer, E61AC514.

Testing: Due to the wide variety of substrates, surface preparation methods, and application methods and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.

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APPLICATION

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.

Conventional Spray—smooth

Air Pressure 40-60psi
Fluid Pressure ..... 10-12 psi
Cap/Tip 797/FF
Reducer ..... water
Reduction Rate ... as needed up to 10-25%

Conventional Spray—texture

Air Pressure ..... 25-35 psi
Fluid Pressure ..... 5-15 psi
Cap/Tip ..... 797 or 765/FF
Reduction Rate . as needed up to 10%
Over-reduction will give poor texture profile and appearance

HVLP:

Smooth Coat

Gun ..... Binks Mach 1
Atomizing Air ..... 40-65 psi
Fluid Pressure ..... 6-10 psi
Cap/Tip 95P/97
Reducer ..... water
Reduction Rate 10-25%

Texture Coat

Atomizing Air ..... 20-30 psi
Fluid Pressure ..... 6-15 psi
Reduction Rate 0-10%

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.

Chemical Resistance

After ½ hour spot test and one hour recovery:

Isopropanol ..... Good
10% NaOH ..... Excellent
Ethyl Acetate ..... Good
Ammonia ..... Excellent
Ivory® Liquid ..... Excellent
Clorox Formula 409® ..... Excellent
MEK ..... Good
Toluene ..... Good
10% HCL ..... Excellent
1 normal H2SO4 ..... Excellent
5% Tide solution ..... Excellent

Stain Resistance

After ½ hour spot test:

Coffee ..... Excellent
Vaseline® ..... Excellent
Coca-Cola ..... Excellent
Catsup ..... Excellent
Motor oil ..... Excellent
Gasoline ..... Excellent
Lipstick ..... Excellent

SPECIFICATIONS

Product Limitations

- Avoid freezing. Store at temperatures of 40°F minimum to 100°F maximum - Freezing may destroy product.
- Allow 10-15 minutes flash off of basecoat before applying texture coat.
- Texture pattern is dependent on equipment set up, viscosity and operator technique.
- Keep container closed to prevent skinning of this fast dry coating. Filtering may be required.
- Product is thixotropic. Do not use viscosity cup to measure viscosity. Do not reduce over 25% for smooth coat or 10% for texturing.
- Water reducible coatings should be applied at high viscosity. They atomize very easily at higher viscosity.
- A minimum of 1.1 mils dry film per coat is required for good adhesion and film integrity.
- Other substrates may show lower pencil hardness with full cure. This may be due to adhesion, substrate profile, and substrate cleaning/pretreatment. Higher film thickness may also give lower pencil hardness.
- For optimum hardness and cure, allow 2-4 weeks of air drying for 1-1/2 to 2 mils dry film. Heavier film may require 6-8 weeks. For force dry curing of 30 minutes at 140°F or greater, full cure is attained after 48 hours additional air drying.
- Do not use Butyl Cellosolve or other cosolvents because of incompatibility.
- Do not use alkyd based primers under Polane 700T coatings.
- Products should be applied at temperatures above 50°F.
- Do not package Polane 700T coated products in air-tight plastic bags unless completely cured. Since Polane enamels continue to cure for several weeks, the build up of organic solvents and reaction by-products could cause improper cure and adhesion failure in use.

Performance Tests

Substrate: 24 gauge Bonderite 1000 steel panel, applied @ 1.5 mils dft cured 30 minutes at 140°F plus 48 hours air dry

Salt Spray Test ..... 48-72 hours
Humidity ..... 100 hours
Conical Mandrel Test ..... passes
Impact Resistance, Reverse
  No fracture ..... 75 in lb
  No Taped Pick Off ..... 120+ in lb
Pencil Hardness ..... HB-F
Crosshatch Adhesion ..... Excellent
Taber Abrasion ..... <75 mg
  1000 cycles, CS17 wheel, 1000 g load
Freeze/Thaw Cycles ..... 2 cycles
HPUV ..... 350 hours, <2.0 Delta-E, FMC-2
Cure Test
100 MEK double rubs ..... slight burnishing

CAUTIONS

Thoroughly review product label for safety and cautions prior to using this product.

A Material Safety Data Sheet is available from your local Sherwin-Williams facility. Please direct any questions or comments to your local Sherwin-Williams facility.

LABEL CAUTIONS

SEE CONTENTS STATEMENT ON LABEL.
CONTAINS MATERIAL THAT MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS AND MAY ADVERSELY AFFECT THE DEVELOPING FETUS BASED ON ANIMAL DATA.
VAPOR HARMFUL. Use only with adequate ventilation. Wear an appropriate properly fitted vapor/particulate respirator (NIOSH approved) during and after application, unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.
FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately.
SPILL AND WASTE: Remove all sources of ignition. Ventilate and remove with inert absorbent. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.
DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.
Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.
FOR INDUSTRIAL USE ONLY.
SEE MATERIAL SAFETY DATA SHEET. 26948-030607.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.