SHERWIN WILLIAMS.

POLANE® T Plus Polyurethane Enamel

Black	F63B70	Blending White	F63W78	Blending Clear	F63F76
Flatting Base	F63T7	Flattening Clear	F63T9	Catalyst	V66V44

DESCRIPTION

POLANE® T Plus Polyurethane Enamel is a two component coating meeting the strict EPA regulations for the solvent emissions and meeting the high performance properties required by the business machine, computer and electronic enclosure industry. Polane T Plus coatings may be applied as low gloss, smooth or textured coating on structural foam and injection molded plastics such as polycarbonate, ABS and polystyrene, SMC, wood and metal substrates.

Advantages:

- Meets EPA requirements of under 3.5 lb/gal VOC catalyzed and reduced at the gun. Reduced solvent emissions
- Four hour working potlife
- High volume solids and spreading rate
- Outstanding physical and chemical properties required by electronic cabinetry market
- Excellent hardness, adhesion and abrasion resistance
- May be applied with conventional spray equipment. Plural component equipment not required
- Air drying or force dry. The baked on finish without baking
- A low energy cure system
- Free of lead and chromate hazards
- Full range of colors available through use of Phoenix bases
- Direct adhesion to many plastic surfaces (see specifications column)
- Does not contain 1,1,1 trichloroethane

CHARACTERISTICS

Gloss: Low, 15-20 units
Volume Solids: 51-52 ± 2%
catalyzed and reduced
may vary by color
Viscosity:
10-15 seconds #3 Zahn Cup
catalyzed and reduced
Recommended film thickness:

Mils Wet	3.0 - 4.0
Mils Dry	1.5 - 2.0

Spreading Rate (no application loss)
393-577 sq.ft./gal @ 1.5-2.0 mils DFT
Drying (1.5 mils dft, 77°F, 50% RH):

To Touch:	20-30 minutes
To Handle:	1-2 hours
To Recoat:	no critical recoat time
Force Dry:	30 minutes at 140°F

Temperatures above 140°F may yield slightly lower gloss.
Do not exceed the heat distortion temperature of the substrate.
Mixing Ratio:

4 parts	Polane T Plus
1 part	Catalyst V66V44
1 part	Reducer R7K95 or MAK
Pot Life:	4 hours
Flash Point:	35-40°F Pensky-Martens Closed Cup
Package Life:	2 years, unopened

Air Quality Data:
Photochemically reactive
Volatile Organic Compounds (VOC)
as packaged, maximum
2.8 lb/gal, 336 g/L
catalyzed and reduced as above
3.5 lb/gal, 420 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 Iron: 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. A filler or primer/barrier coat may be required. Please consult your Sherwin-Williams Chemical Coatings Sales 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. For untreated metal: Prime with Industrial Wash Primer, P60G2, or Kem Aqua Wash Primer, E61G520, followed by Polane Plus Sealer, E65A71 or 2.8 VOC Catalyzed Epoxy Primer, E61A280.
For best corrosion resistance, prime treated steel with Polane Plus Sealer, E65A71 or 2.8 VOC Catalyzed Epoxy Primer, E61A280.
Wood (interior only)**:** Must be clean, dry, and finish sanded. Seal with Sher-Wood® Vinyl Sanding Sealers, T67F3, or 2.8 Polane Plus SprayFil.

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

Reduction: Reducer R7K94 may be used for slightly faster flash off. For better flow, R7K216 may partially replace the other reducers.
Note: Maximum total reduction is 20% by volume to maintain 3.5 lb/gal VOC.

Smooth coat can be applied with airless, HVLP or conventional spray equipment. Texture coat requires conventional or HVLP spray equipment.

Conventional Spray:
Air Pressure ..... 30-40 psi
Fluid Pressure ..... 8-12 psi
Cap/Tip ..... DeVilbiss 797/FF
Allow 15 minutes flash off before texturing.

May be applied with Electrostatic Air spray equipment.

The texture may be varied by adjusting the atomizing and fluid pressures until the desired texture size is obtained. Lower atomizing pressures give a larger texture pattern. Higher atomizing pressure reduces the texture size.

Cleanup:
Clean tools/equipment immediately after use with Reducer, R7K95 or MAK. Polane reducers, MEK and MIBK may also be used but are not HAPS compliant.
Follow manufacturer's safety recommendations when using any solvent.

Performance Tests
Substrate: Bonderite 1000 steel panels, 1.8 mils dry, 30 min. at 140°F, 10 days air cure

Pencil Hardness ..... 2H to 3H
Adhesion ..... Excellent
Taber Abrasion
CS 17 wheel, 1000 g, 1000 cycles ... <100 mg
Impact Resistance, Direct ..... 80 in lb
Impact Resistance, Reverse ..... 40 in lb
Humidity 100°F, 100% RH ..... 100 hours
Salt Spray Test ..... 100 hours
1/8" rust creepage at scribe

SPECIFICATIONS

Product Limitations:
- Polane T Plus coating must be catalyzed at 4:1 ratio with V66V44 by volume. DO NOT VARY CATALYST RATIO. The catalyst ratio has been established for optimum hardness, flexibility, gloss and chemical and solvent resistance.
- Polane Catalyst V66V44 is recommended for interior use only. This product is not intended for exterior exposure application because of limited color and gloss retention properties.
- Do not spray hot. Heat shortens pot life. Do not pump catalyzed material from drums into circulating system. Friction heat developed by pumps and circulation will shorten pot life.
- Protect Polane Coatings, Catalyst, and Reducer from moisture as water affects potlife and film properties. Store indoors. Keep containers closed at all times.
- Do not package Polane coated products in airtight plastic bags unless completely cured. Since Polane Coatings continue to cure for several weeks, the buildup of organic solvents and reaction by products could cause improper cure and adhesion failure in use.
- Do not blend with any other polyurethane quality. No other catalysts, colorants, or reducers are recommended because foreign materials such as alcohols, glycols and lacquer thinners affect film performance properties.
- If recoating after more than 7 days cure, sand lightly to ensure intercoat adhesion.

Chemical Resistance
After 1/2 hour spot test and 1 hour recovery:
Isopropanol ..... Excellent
10% NaOH ..... Excellent
Ethyl Acetate ..... Excellent
Ammonia ..... Excellent
Drano® ..... Excellent
Ivory Liquid ..... Excellent
Clorox Formula 409® ..... Excellent
MEK ..... Excellent
Toluene ..... Excellent
10% HCL ..... Excellent
1,1,1 - Trichloroethane ..... Excellent
1 normal H_2SO_4 ..... Excellent
5% Tide® Solution ..... Excellent

Staining Resistance
Resistance to staining after 1/2 hour spot test
Coffee ..... Excellent
Vaseline® ..... Excellent
Coca Cola® ..... Excellent
Catsup ..... Excellent
Motor Oil ..... Excellent
Gasoline ..... Excellent
Lipstick ..... Excellent
MEK Resistance — 50 single rubs should have slight to no burnish.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Material Safety Data Sheet (MSDS) 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.

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.