General Industrial Coatings

CC-D13A

POLANE® T Plus Polyurethane Enamel

Black	F63B70	Clear Tint Base	F63F76C	Catalyst	V66V47
Blending Clear	F63F76	Mid-Gloss Clear Tint Base	F63V117C	Custom Blend Series	F63VX
Blending White	F63W78	Satin Clear Tint Base	F63V118C	Custom Tint Series	F63VN

DESCRIPTION

POLANE® T Plus Polyurethane Enamel is a low gloss, two component coating 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:

- Formulated to meet ≤2.8 or ≤3.5 lbs/gal VOC*, less exempts, when catalyzed & reduced as recommended.
- 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
- A low energy cure system
- Available in a broad range of colors
- Direct adhesion to many plastic surfaces (see specifications column)

CHARACTERISTICS

60° Gloss:

Blending Bases	15-20 units
F63V117C (Mid-Gloss Clear Tint Base)	55-65
F63V118C (Satin Clear Tint Base)	25-35
F63F76C (Clear Tint Base)	10-20

Volume Solids: 52 ± 2 %
Catalyzed and reduced, may vary by color

Viscosity: 10-15 secs., #3 Zahn Cup
Catalyzed and reduced

*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.

Recommended Film Thickness:

Mils Wet	3.0-4.0
Mils Dry	1.5-2.0

Spreading Rate (no application loss)**:**
420-555 ft.^{2}/gal. at 1.5-2.0 mils DFT

Cure:
Air Dry or
Force Dry 30 mins. at 140° F
Temperatures above 140° F may yield slightly lower gloss.

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

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

Mixing Ratio (by volume)**:**

2.8 VOC

Polane T Plus	4 Parts
Catalyst V66V47	1 Part
+Exempt Reducer(s)	1 Part

+R2KS1 (Oxsol® 100), R6K38 (GI Reducer), R7K111 (High Solids Compliant Thinner #1) or R7K7 (Dimethyl Carbonate)

3.5 VOC

Polane T Plus	4 Parts
Catalyst V66V47	1 Part
Reducer R7K74	1 Part

Potlife: 4 hours

Flash Point (Pensky Martens Closed Cup)**:** 35° F

Package Life: 2 years, unopened
V66V47 12 months, unopened

Air Quality Data (Theoretical):

- Photochemically reactive
- Volatile Organic Compounds (VOC) as packaged, maximum, less exempts ≤2.8 lbs/gal, 340 g/L
- Catalyzed and reduced:
  - With exempt reducers ≤2.8 lbs/gal, 340 g/L
  - With non-exempt reducers ≤3.5 lbs/gal, 420 g/L

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 (untreated)**:** Prime with Industrial Wash Primer, P60G2, RoHS Compliant Wash Primer, P60G10, or Kem Aqua® Wash Primer, E61G522.

Galvanized Steel (untreated)**:** Prime with Industrial Wash Primer P60G2, RoHS Compliant Wash Primer, P60G10, 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. A filler or primer/barrier coat may be required. Please consult your Sherwin-Williams Product Finishes 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, RoHS Compliant Wash Primer, P60G10, or Kem Aqua Wash Primer, E61G522, 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 Sealer, T67F3, or 2.8 Polane Plus SprayFil.

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.

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APPLICATION

Typical Setups

Reduction:

2.8 VOC

Reduce with the exempt solvents listed below. Maximum total reduction is 20% by volume: R2KS1 (Oxsol® 100), R6K38 (GI Reducer), R7K111 (High Solids Compliant Thinner #1) or R7K7 (Dimethyl Carbonate).

3.5 VOC

Reduce with R7K74. Maximum total reduction is 20% by volume to maintain 3.5 lb/gal VOC. Using other Polane reducers (MAK, R7K84, R7K94, R7K95) will change the VOC and may affect gloss. For better flow, R7K216 may partially replace reducer, but will change the VOC.

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

Texture Coat: A texture coat requires conventional or HVLP spray equipment. Allow 15 minutes flash off before texturing. 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.

Conventional Spray:

Air Pressure	45-55 psi
Fluid Pressure	8-12 psi
Tip	0.055 in

May be applied with electrostatic air spray equipment.

Cleanup:

Clean tools/equipment immediately after use with Reducer, R7K74, 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.

ADDITIONAL INFORMATION

1. Polane T Plus coating must be catalyzed at 4:1 ratio with V66V47 by volume. **Do not vary catalyst ratio**. The catalyst ratio has been established for optimum hardness, flexibility, gloss, and chemical and solvent resistance.
2. Polane Catalyst V66V47 is recommended for interior use only. This product is not intended for exterior exposure application because of limited color and gloss retention properties.
3. Do not spray hot. Heat shortens potlife. Do not pump catalyzed material from drums into circulating system. Friction heat developed by pumps and circulation will shorten potlife.
4. Protect Polane coatings, catalyst, and reducers from moisture as water affects potlife and film properties. Store indoors. Keep containers closed at all times.
5. 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.
6. 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.
7. If recoating after more than 7 days cure, sand lightly to ensure intercoat adhesion.
8. Blend with Opticolor Express®, Phoenix® or Color Express® colorants only. The maximum tint load is listed in the table below:

	F63F76	F63W78
Opticolor Express	21 oz/gal	4 oz/gal
Phoenix	21 oz/gal	4 oz/gal
Color Express	24 oz/gal	4 oz/gal

9. Adding the maximum allowed tint load can increase the coating gloss.
10. Gloss levels may be adjusted by using F63V68 in the Opticolor, Phoenix or Color Express colorant systems.

Performance Tests*

Substrate:	Bonderite® 1000 panels 1.8 mils dry
Cure:	30 mins at 140° F, 10 days post-cure
Salt Spray Test	100 hours 1/8" rust creepage at scribe
Impact Resistance, Direct	80 in lb
Impact Resistance, Reverse	40 in lb
Humidity (100° F, 100% RH)	100 hours
Pencil Hardness	2H to 3H
Adhesion	Excellent
Taber Abrasion	<100 mgs CS17 wheel, 1,000 g, 1,000 cycles

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

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 H2SO4	Excellent
5% Tide® Solution	Excellent

Staining Resistance:

Resistance to staining after 1/2-hour spot test

Coffee	Excellent
Vaseline®	Excellent
Coca Cola®	Excellent
Ketchup®	Excellent
Motor Oil	Excellent
Gasoline	Excellent
Lipstick	Excellent

MEK Resistance: 50 single rubs should have slight to no burnish.

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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