



**SHERWIN
WILLIAMS.**

Chemical Coatings

CC-D20 POLANE[®] HS Plus Polyurethane Enamel

Black F63B60
Orange F63E63
Green F63G62
Blue F63L63
Hi Hide Organic Red F63R62

Red Oxide F63R64
Magenta F63R65
Brite Red F63R66
Silver F63S65
Clear F63V67
Blending Clear F63V68

White F63W66
Hi Hide Opaque Yellow GS .. F63Y63
Hi Hide Organic Yellow RS ... F63Y65
Yellow Oxide F63Y68
Catalyst V66V55

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p>POLANE[®] HS Plus Polyurethane Enamel is a two component coating providing high gloss, excellent exterior durability and resistance properties along with high volume solids and 2.8 VOC compliance*. The single pigment colors are designed for intermixing to achieve great versatility in color matching capability.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Under 2.8 VOC with Polane HS Plus Catalyst V66V55 • Excellent exterior color and gloss retention with V66V55 catalyst • Excellent exterior physical and chemical performance properties • Excellent appearance over many types of metal and plastic substrates • Ideal coating for machine tool industry with resistance to most lubricants and cutting oils • High solids - high spreading rate • Air dry or force dry curing • Full range of colors may be custom blended • Excellent hardness and impact resistance • Excellent mar and abrasion resistance • Apply by conventional, airless, HVLP or electrostatic spray • Much faster drying times achieved with the use of infratherm type ovens • Free of lead and chromate hazards <p>*VOC compliance limits vary from state to state; please consult local Air Quality rules and regulations.</p>	<p>Gloss: Full, 90+ units Volume Solids: 59 ± 2% catalyzed and reduced, may vary by color</p> <p>Viscosity: catalyzed and reduced 18-27 seconds #3 Zahn Cup</p> <p>Recommended film thickness: Mils Wet: 2.0 - 2.5 Mils Dry: 1.25 - 1.5</p> <p>Spreading Rate (no application loss) 626-768 sq ft/gal@ 1.25-1.5 mils DFT</p> <p>Air Drying (1.5 mils dft, 77°F, 50% RH): To Touch: 1-1½ hours To Handle: 10-12 hours Tack Free: 8 hours To Recoat: 5-6 hours Force Dry: 30-60 min. at 140-180°F Curing temperature must not exceed the heat distortion temperature of the plastic substrate. Infratherm oven schedule to tack free: (Flash off: 1 minute) 1.5 lb Gas: 3 min., 2.5 lb Gas: 7 min.</p> <p>Mixing Ratio: 3 part Polane HS Plus including Accelerator 1 part Catalyst V66V55 0.48 part (12%) MAK R6K30 Pot Life: 1 hour</p> <p>Accelerated Drying: Add up to 1 ounce of Polane Accelerator, V66VB11 per gallon of Polane HS Plus. To Touch: 30-60 minutes To Handle: 2-3 hours Tack Free: 1-2 hours To Recoat: 1-1½ hours Force Dry: 30 min. at 140-180°F</p> <p>Flash Point: 95°F Seta Flash Closed Cup</p> <p>Package Life: 2 years, unopened</p> <p>Air Quality Data: Non-photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum 2.8 lb/gal, 336 g/L catalyzed and reduced as above, maximum 2.8 lb/gal, 336 g/L An Environmental Data Sheet is available from your local Sherwin-Williams facility.</p>	<p>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.</p> <p>Aluminum, untreated: 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.</p> <p>Galvanized Steel, untreated: 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.</p> <p>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.</p> <p>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.</p> <p>Wood (interior only): Must be clean, dry and finish sanded. Apply Polane Plus Sealer, E65A71 or Polane Primer Sealer, E65A4.</p> <p>Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.</p>

APPLICATION

Typical Setups

Note: Maximum total reduction is 12% by volume to maintain 2.8 VOC.

Conventional Spray:

Air Pressure 40-50 psi

Fluid Pressure 5-10 psi

Airless Spray:

Pressure 2000-2800 psi

Tip009 - .011"

Electrostatic Spray:

Conductivity is 0.2-0.8 megohms resistance, which is suitable for all hand-held electrostatic spray setups.

HVLP:

Air Pressure at Cap 3-5 psi

Fluid Pressure 5-10 psi

Tip040

Air Assisted Airless:

Air Pressure 10-30 psi

Fluid Pressure 600-900 psi

Tip009 - .013"

Note: Additional reduction necessary which exceeds 2.8 VOC.

Dipping, brushing or flowcoat application is not recommended.

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

Bonderite 1000 P60 steel panels, F63W66 catalyzed and reduced, 1.5 mils dft, 30 minutes at 180°F, 14 days air cured

Salt Spray Test 300 hours

1/8" rust creepage at scribe

Humidity 100°F, 100% RH 300 hours

Impact Resistance, Direct 80 in lb

Impact Resistance, Reverse 80 in lb

Pencil Hardness H

Taber Abrasion

CS 17 wheel, 1000 g, 1000 cycles ... <100 mg

Water Immersion 24 hours

Adhesion, Crosshatch Excellent

MEK, 100 double rubs slight burnish

Heat Resistance, Dry 250°F

Chemical Resistance

Lubricating & Cutting Oils Excellent

Hydraulic Fluids Excellent

SPECIFICATIONS

Product Limitations:

- Polane HS Plus coatings must be catalyzed with V66V55 for exterior application. Do not vary catalyst ratio. Maintain an exact ratio. The catalyst ratio has been established for optimum hardness, flexibility, gloss, chemical and solvent resistance.
- For low gloss exterior applications, use Polane S Plus coatings rather than lowering gloss of Polane HS Plus.
- Do not blend with polyurethane other than Polane S Plus for exterior applications. No other catalysts, colorants, flattening bases or reducers are recommended because foreign materials such as alcohols and glycols destroy performance properties. Lacquer thinners and alcohol containing solvent blends should not be used with Polane enamels.
- Organic colors have limited hiding by themselves and must be blended with other chromatics for use.
- Polane HS Plus coatings are not recommended for use on exterior wood.
- Do not spray hot. Heat shortens potlife. Do not pump catalyzed materials from drums into circulating system. Friction heat developed by pumps and circulation will shorten potlife.
- Protect Polane Enamels, Catalyst and Reducer from moisture as water affects potlife and properties. Store indoors.
- Do not package Polane coated products in airtight plastic bags unless completely cured. Since Polane Enamels 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 exceed 1.5 mil dry film with airless or air assisted airless equipment due to sagging tendencies.
- Silver F63S65 does not offer the same color and gloss retention as other colors because of the weathering effect of aluminum pigment. Do not use for applications requiring long term color and gloss retention.
- For SILVER ONLY, use MEK as a reducer rather than MAK. The faster evaporation helps the metallic pigment orientation.
- The Clear F63V67 is intended for custom color intermixing and should not be used as a clearcoat because of its potential for yellowing.
- F63V68 is not a stand alone clear and must be mixed with other components/bases.
- For interior use, Polane HS Plus may be catalyzed 2:1 with Polane Plus Catalyst V66V44 and reduced 24% MAK

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.