



**SHERWIN
WILLIAMS.**

Chemical Coatings

CC-D19

POLANE® S Plus Polyurethane Enamel

Black F63B21
Orange F63E23
Clear F63F24
Green F63G26

Blue F63L27
Magenta F63R20
Red Oxide F63R28
Bright Red F63R29

Blending White F63W25
Yellow Oxide F63Y23
Yellow (Red Shade) F63Y24
Catalyst V66V55

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p>POLANE® S Plus Polyurethane Enamel is a low gloss, two component, acrylic polyurethane providing high volume solids, 2.8 lb/gal VOC compliance*, and excellent exterior durability. Its hardness, chemical resistance and durability make it an ideal coating for exterior building products, extrusions, farm and construction equipment, machinery, transformers, transportation, communication equipment, and a broad array of plastic and metal applications.</p> <p>Advantages:</p> <ul style="list-style-type: none"> Complies with 2.8 VOC* EPA solvent emission regulations Excellent color and gloss retention for exterior applications Excellent physical and chemical performance properties Excellent appearance over many types of metal and plastic substrates Direct adhesion to a wide array of plastic substrates Lower energy cure system - air dry or force dry High solids - high spreading rate Full color range through monochromatic intermix system Excellent hardness, mar resistance and abrasion resistance Texturable Apply by conventional, airless, air-assisted airless, HVLP, or electrostatic spray Intermixable with Polane HS Plus Polyurethane to provide full gloss range Non-photochemically reactive Good gloss consistency over humidity and cure extremes Meets the performance requirements of AAMA 2603-98 for extruded aluminum Meets the coating performance requirements of the ANSI Specification for pad mounted transformers <p>*VOC compliance limits vary from state to state; please consult local Air Quality rules and regulations.</p>	<p>Gloss: 25-30 units</p> <p>Volume Solids: 59 ± 2% catalyzed and reduced, may vary by color</p> <p>Viscosity: 18-25 seconds #3 Zahn Cup catalyzed and reduced</p> <p>Recommended film thickness:</p> <p>Mils Wet 3.1-3.3 Mils Dry 1.8-2.0</p> <p>Spreading Rate (no application loss) @ 1.8-2.0 mil dft: 472-525 sq ft/gal</p> <p>Air Drying (1.8 mils dft, 77°F, 50% RH):</p> <p>To Touch: 20-25 minutes To Handle: 4-8 hours Tack Free: 45-90 minutes To Recoat: 15-30 minutes Force Dry: 30-60 minutes at 140-180°F</p> <p>Curing temperature must not exceed the heat distortion temperature of the substrate.</p> <p>Mixing Ratio:</p> <p>6 parts Polane S Plus 1 part Catalyst V66V55 0.175 part (2½%) MAK R6K30</p> <p>Pot Life: 2 hours</p> <p>Accelerated Drying: Add ¼ ounce of Polane Accelerator, V66VB11 per gallon of Polane S Plus. Pot life is reduced to 1 hour.</p> <p>To Touch: 15-20 minutes To Handle: 2-4 hours Tack Free: 30-60 minutes To Recoat: 15-30 minutes Force Dry: 30 minutes at 140-180°F</p> <p>Flash Point: 103°F Seta Flash</p> <p>Package Life: 2 years, unopened</p> <p>Air Quality Data: Non-photochemically reactive Volatile Organic Compounds (VOC) catalyzed and reduced as above, 2.8 lb/gal, 336 g/L</p> <p>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 or Galvanized Steel: 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 best corrosion resistance, prime untreated steel with 2.8 VOC Catalyzed Epoxy Primer, E61A280.</p> <p>Cast Iron: Fill with Polane® 2.8 Plus SprayFil, D61H75 and sand, seal with Polane® Plus Sealer, E65A71</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 2.5% by volume to maintain 2.8 VOC.

Conventional Spray:

Air Pressure 40-50 psi
Fluid Pressure 5-10 psi
Tip..... .047"

Airless Spray

Pressure 2000-2800 psi
Tip..... .011 - .013"

Air Assisted Airless:

Air Pressure 10-30 psi
Fluid Pressure 1500-2100 psi
Tip..... .011 - .013"

Electrostatic Spray:

Conductivity is 1.0-1.5 megohms resistance, which is suitable for all hand-held electrostatic spray setups.

HVLP:

Atomizing Air Pressure at the cap 8-10 psi
Fluid Pressure 5-10 psi
Tip..... .055

Dipping, brushing or flow coat 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

Substrate Bonderite 1000 steel panels
F63W25 catalyzed and reduced, 1.8 mils dft,
30 minutes at 180°F, 14 days air cured

Humidity 100°F, 100% RH 500 hours
Conical Mandrel passes
Impact Resistance, Direct 60 in lb
Impact Resistance, Reverse 10 in lb
Pencil Hardness H
Taber Abrasion

CS 17 wheel, 1000 g, 1000 cycles ... <100 mg
Water Immersion 24 hours
no blistering or loss of adhesion

Adhesion, Crosshatch Excellent
MEK, 100 double rubs slight burnish
QUV, 1220 hours, 95% gloss, 0.7DE maximum

Chemical Resistance

Lubricating & Cutting Oils Excellent
Hydraulic Fluids Excellent

SPECIFICATIONS

Product Limitations:

- Polane® S Plus coating must be catalyzed with V66V55. Do not vary catalyst ratio. Maintain an exact ratio. The catalyst ratio has been established for optimum hardness, flexibility, gloss, chemical and solvent resistance. Do not use Polane® Interior Catalyst V66V27 or V66V44, it gives a brittle film and very short pot life.
- Do not blend with any polyurethane other than Polane® HS Plus. No other catalysts, colorants 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.
- F63E23 and F63Y24 have limited hiding and should be used with other colors. F63G26, F63L27, F63R20 and F63R29 have high tinting strength but lack hiding and must be mixed with other colors. Organic monochromatics should not be used by themselves.
- Polane® S Plus coatings are not recommended for exterior use on 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, catalysts 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.
- A primer is always recommended for exterior application on steel.
- Do not exceed 2.5 mil dry film with airless or air assisted airless equipment due to sagging tendencies.
- Use Polane® HS Plus Silver F63S65 for metallic colors in this quality. 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.
- Use MEK as a reducer for Silver F63S65 rather than MAK. The faster evaporation of MEK helps the metallic pigment orientation.
- The Clear F63F24 is intended for custom color intermixing and should not be used as a clear coat because of its potential for yellowing.

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.



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