Product Finishes

POLANE® HS Plus Polyurethane Enamel

ANSI 70 Gray ..... F63AC149 Catalyst..... V66V55

DESCRIPTION

POLANE® HS Plus Polyurethane Enamel ANSI 70 Gray, F63AC149 is a two component coating providing high gloss, excellent exterior durability and resistance properties along with high volume solids and 2.8 VOC compliance*.

Advantages:

- 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
- 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 hazards as packaged in compliance with Consumer Product Safety Commission's (CPSC) 16 CFR Chapter II: subchapter B, part 1303.

*VOC compliance limits vary from state to state; please consult local Air Quality rules and regulations.

CHARACTERISTICS

60° Gloss: ≥90 units

Volume Solids(%): 59.5 ± 2
catalyzed and reduced

Viscosity: catalyzed and reduced
18-27 seconds #3 Zahn Cup

Recommended film thickness:
Mils Wet: 2.1 - 2.5 Mils Dry: 1.25 - 1.5

Spreading Rate (no application loss)
764-637 sq ft/gal@ 1.25-1.5 mils DFT

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.

Mixing Ratio:
3 part F63AC149
1 part Catalyst V66V55
0.48 part (12%) MAK R6K30
Pot Life: 3 hours

Accelerated Drying:
Add up to 1 ounce of Polane Accelerator, V66VB11 per gallon of F63AC149.
Pot Life: 1 hour

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

Flash Point: 95°F PMCC

Package Life: 2 years, unopened

Air Quality Data (Theoretical)**:**

- Non-photochemically reactive
- Volatile Organic Compounds (VOC) as packaged, maximum, less exempt solvents 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.

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 (untreated): Prime with RoHS Compliant Wash Primer, P60G10 or Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G520, followed by Polane® Plus Sealer, E65A71 or 2.8 VOC Catalyzed Epoxy Primer, E61A280.

Galvanized Steel (untreated): Prime with RoHS Compliant Wash Primer, P60G10, Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G520, followed by Polane® Plus Sealer, E65A71 or 2.8 VOC Catalyzed Epoxy Primer, E61A280.

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 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 RoHS Compliant Wash Primer, P60G10, 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. Apply Polane Plus Sealer, E65A71 or Polane Primer Sealer, E65A4.

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

(continued on back)

APPLICATION

Typical Setups

Reduction: Reduce with R6K30. 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
Tip.....009 - .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
Tip ..... .040

Air Assisted Airless:
Air Pressure ..... 10-30 psi
Fluid Pressure ..... 600-900 psi
Tip ..... .009 - .013"
Note: Additional reduction necessary may exceed 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.

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, flatting 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.
- 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.
- For interior use, Polane® HS Plus may be catalyzed 2:1 with Polane® Plus Catalyst V66V47. Reduce with MAK, R6K30.

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.

Columbus Regional Lab
D. Gellert
7/15/13