Product Finishes

CC-B23

PERMACLAD® 2400
High Solids Polyester Baking Enamel

White…….... H67WC55
Low Gloss White ……H67WC56

Gloss Clear..... H67CC1
Low Gloss Clear..... H67TC1

Black..... H67BC78
Custom Blend..... H67XX Series

DESCRIPTION

PERMACLAD® 2400 High Solids Polyester Baking Enamel is a 3.0 lb/gal VOC coating that meets the requirements of the exterior aluminum extrusion market. This is also recommended for exterior applications on iron or zinc phosphated steel.

Advantages:

- Meets 3.0 lb/gal VOC* at application
- Designed to meet AAMA 2603 specifications for aluminum extrusions
- Excellent color and gloss retention
- High volume solids
- Low solvent emissions
- Excellent hardness and resistance to marring
- Good one coat hiding
- Apply using conventional, or electrostatic bell, disc, or handgun spray equipment
- Available in a wide range of colors

Not Stocked - Special Order
Sag Control Additive ……. V80VC43

*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.

CHARACTERISTICS

Gloss: 30-85 units (60°) depending on formulation

Volume Solids: 72± 2% varies by color

Viscosity:
300-900 cps, (Brookfield #3 Spindle, 100 rpm @ 77°F) depending on formulation

Recommended film thickness:
Mils Wet 1.3 - 1.8
Mils Dry 0.9 - 1.3

Spreading Rate (no application loss)
888-1280 sq ft/gal @ 0.9-1.2 mil DFT

Baking Schedule:
Flash off: 5 minutes
then bake: 10-15 minutes at 325-350°F

Flash Point: 105°F, Pensky-Martens Closed Cup

Package Life: 2 years, unopened

Air Quality Data:

- Photochemically reactive
- Volatile Organic Compounds (VOC), determined by using ASTM D2369-92 as packaged, maximum:
  2.70 lb/gal, 325 g/L
- Reduced 7% with High Flash Naphtha R2K5: 3.0 lb/gal, 360 g/L

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

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: A minimum of a 5 stage chrome phosphate metal treatment, or equivalent, is required for good adhesion and optimum coating performance properties.

Steel or Iron: Remove rust, mill scale, and oxidation products. A minimum of a 3 stage iron or zinc phosphate metal treatment, or equivalent, is required for good adhesion and optimum coating performance properties.

PERMACLAD® 2400 Intermix System:

- For high gloss, use H67CC1 Gloss Clear.
- For low gloss, to 30 units, use H67TC1 Low Gloss Clear.
- For intermediate gloss levels, blend high and low gloss clears to desired gloss range.
- To increase hiding, ratio of black or white portion may be increased.
- To decrease hiding, ratio of black or white portion may be increased.
- To increase thixotropy and orange peel on application, add up to 5% Sag Control Additive V80VC43 and reduce the percent reduction by a comparable percent to maintain 3.0 VOC at application.

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APPLICATION

Typical Setups

Reduction: Reduction must not exceed 7% to maintain 3.0 lb/gal VOC. Some special products may be formulated at lower solids allowing **no** reduction to maintain 3.0 lb/gal VOC. Some metallic or bronze colors may require VOCs higher than 3.0 lb/gal for proper application. Check the individual formulation. Heat, up to 120°F, may be used to reduce viscosity and for easier applications. For more flow, reduced textures and to eliminate solvent popping, add 1% to 4% Butyl Carbitol Acetate, DB Acetate or equivalent as part of the reduction.

May be applied using:
Conventional Spray
Air Pressure.....50-60 psi
Reducers.....Xylene, Hi Flash Naphtha, Aromatic Naphtha 150 Flash
Reduction Rate.....7% Maximum
Application Viscosity.....17-21 seconds #3 Zahn

Electrostatic Spray
Atomizing Air .....50-60 psi
Polarity ..... 0.5-2.0 Megohms
Kilovolts (Kv) 65-95
Reducers.....Xylene, Hi Flash Naphtha, Aromatic Naphtha 150 Flash
Reduction Rate7% Maximum. Use Diacetone Alcohol for polarity.
Application Viscosity.....17-21 seconds #3 Zahn

Bells
Speed .....25,000 RPM
Polarity ..... 0.5-2.0 Megohms
Kilovolts (Kv) 65-95
Reducers.....Xylene, Hi Flash Naphtha, Aromatic Naphtha 150 Flash
Reduction Rate7% Maximum. Use Diacetone Alcohol for polarity.
Application Viscosity.....15-20 seconds #3 Zahn

High Speed Disc
Speed .....20,000 RPM
Polarity ..... 0.5-2.0 Megohms
Kilovolts (Kv) 65-95
Reducers.....Xylene, Hi Flash Naphtha, Aromatic Naphtha 150 Flash
Reduction Rate7% Maximum. Use Diacetone Alcohol for polarity.
Application Viscosity.....11-15 seconds #3 Zahn

Reduced Resistivity: 0.5-1.5 megohm. To lower resistivity, add 1 to 5% Diacetone Alcohol, R6K24 as part of the reduction.

Cleanup:
Clean tools/equipment immediately after use with Hi Flash Naphtha 100, R2K5. Follow manufacturer's safety recommendations when using any solvent.

ADDITIONAL INFORMATION

- Permaclad® 2400 is a thermoset coating requiring thermal energy input to drive the curing mechanism to completion. The actual time and temperature may be varied depending on the mass of ware being coated as well as ambient conditions to obtain cure of 100 double MIBK rubs.
- Good metal cleaning and pretreatment are essential to obtain optimum adhesion and performance properties. Metal treatment residues and streaks will show through topcoat and retard cure.
- Not recommended for extrusions for skyscrapers and monumental buildings that must meet AAMA 2604 or 2605 specification.
- Some aluminum surfaces have anodizing or other chemical treatments that prevent good coating adhesion. Consult your Sherwin- Williams Representative for recommendations.
- H67CC1 and H67TC1 may be used "as is" as a clear coating, for interior applications.
- For opaque colors, clears (H67CC1 and/or H67TC1) must be added to pigmented component. Recommended level is 1:1 ratio of pigmented component to clear.
- Metal cleaning, metal treatment and film thickness influence corrosion resistance.

Performance Tests
Substrate: Bonderite® 1000 iron phosphate and chrome rinse @ 1.0 mils dft, baked 15 minutes at 325°F
Pencil Hardness ..... H - 3H
Mar Resistance ..... Excellent
Salt Spray 5% ASTM B117 .....144 hours
Humidity, 100% at 95°F
ASTM D2247.....1000 hours
Impact Resistance
Direct ..... 80 in lbs
Indirect..... 30 in lbs
Flexibility, Conical Mandrel.....Passes
Cure 100 double MIBK rubs...minimal burnish

Substrate: Chrome phosphated aluminum @ 1.0 mils DFT, baked 15 minutes at 325°F
Pencil Hardness ..... H - 3H
Mar Resistance ..... Excellent
Salt Spray 5% ASTM B117. .....1000 hours
Humidity, 100% at 95°F
ASTM D2247.....1000 hours
Impact Resistance
AAMA 2603, spec 0.1" deformity
Direct.....Passes
Indirect.....Passes
Flexibility, Conical Mandrel .....Passes
Cure 100 double MIBK rubs..minimal burnish

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Safety Data Sheet (SDS) for safety and cautions prior to using this product.

Regulatory documents are available from your local Sherwin-Williams facility or at www.paintdocs.com.

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.