



UC80147 Series

Machine Applied Coatings

MACHINECOAT® Plus Exterior Acrylic Latex Finish

GENERAL DESCRIPTION

Machine Applied Coatings MACHINECOAT Plus Exterior Acrylic Latex Finish is designed as an air-dry or force-dry coating to be applied to new wood siding (rough-sawn or smooth cedar, redwood, pine, etc.) or specific brands of manufactured siding.

MACHINECOAT Plus is designed for application by Professional Authorized Machine Applicators using approved machine application methods and equipment.

MACHINECOAT Plus Exterior Acrylic Latex Finish can also be used for touch-up and trim application.

APPROVED SUBSTRATES

- Wood
- Wood composites
- Medium density overlay panel (MDO)
- Medium Density Fibreboard (MDF)

GENERAL SURFACE PREPARATION

Proper surface preparation is essential. Surfaces must be free of dust, sawdust, moisture, oil, grease, mildew, and other contaminants. Substrates should be checked for moisture content. At the time of the application, wood to be coated must have a moisture content of less than 19%.

Painting "green" wood with a moisture content of greater than 19% will increase dry-time, inhibit adhesion, and promote extractive bleeding and blistering.

LIMITATIONS OF USE

For use by Professional Authorized Machine Applicators only. This product is designed for application only by professional, trained personnel using proper equipment under controlled conditions and are not intended for sale to the general public.

Apply only when air, surface, and product temperatures are above 10°C (50°F) and at least 3°C (5°F) above the dew point.

Radiant Infra-Red heat or hot air convection ovens may be used to force dry this product. Care must be taken to avoid overheating so that blisters in the film do not form. If blistering occurs, premature failure of the finish may occur.

Not recommended for touch-up in large areas.

A second application of lighter colours may be necessary for complete coverage on rough sawn wood.

These products are designed for wood based materials and should not be used over bare, untreated metal.

At the time of the application, wood to be coated must have a moisture content of less than 19%.

Some woods, such as redwood and cedar, contain natural water-soluble extractive tannins that tend to "bleed" or migrate to the surface. Application of light colours of MACHINECOAT Plus to these tannin staining woods may require the use of a primer to retard extraction bleeding.

Recommended for Exterior applications. All application on interior materials must be first confirmed by PPG Technical Service Department for uses and application guidelines.

PROTECT FROM FREEZING.

PACKAGING

18.9 L

PRODUCT AND TINTING INFORMATION

Intermix Bases:

- UC80147 White Base
- UC80148 Black Base
- UC80149 Yellow Base
- UC80150 Red Base
- UC80151 Deep Green Base
- UC80152 Deep Blue Base
- UC80153 Magenta Base
- UC80154 Bright Yellow Base
- UC80155 Bright Red Base
- UC80166 Blue Shade Red

MACHINECOAT Plus Intermix Bases can be used as is or blended together to make hundreds of colours.

DO NOT TINT.

Verified colour match formulas may be accessed through the formula book portion of the computer colour matching system. Custom colour formulas may be achieved using the matching software in the computer colour matching system. Colour formulas are dispensed gravimetrically (by weight) using the dispense cell system into the appropriate size container.

PRODUCT DATA

- PRODUCT TYPE:** Acrylic Latex
- VOLUME SOLIDS:** 38% ± 2%
- WEIGHT SOLIDS:** 52% ± 2%
- VOC:** < 100 g/L
- DENSITY:** 1.3 kg/L

*Product data calculated on UC80147.

COVERAGE : Approximate coverage on rough-sawn wood: 16.3 to 18.6 m² (175 to 200 ft²); on smooth wood: 18.6 to 20.9 m² (200 to 225 ft²); prepared wood or manufactured siding: 18.6 to 20.9 m² (200 to 225 ft²).

Coverage figures do not include loss due to surface irregularities and porosity or material losses due to application method or mixing.

Theoretical Wet Film Thickness per Coat:** 5.0 mils
127 microns

Required Dry Film Thickness per Coat: 1.9 mils minimum
48 microns minimum.

**Additional wet film may be necessary in order to achieve the required dry film thickness.

Viscosity (Stormer @ 25°C): 63 - 70 Krebs***
***Manufacturing specification, working viscosity may vary

DRYING TIME: A minimum of 8 hours at 21°C (70°F) and 50% humidity is recommended for air drying. Drying times listed may vary depending on temperature, humidity, film build, colour, air movement, application equipment, and line conditions. Under suitable conditions the product may be forced dried.

CLEANUP: Remove as much product quantity as possible and clean equipment with lukewarm soapy water, high-pressure water jet, or steam cleaner immediately after use.

DISPOSAL: Consult your municipality in order to dispose of paint residues according to environmental regulations. Do not pour down a drain or storm sewer.

FLASH POINT: Over 93°C (200°F)

MACHINECOAT Plus Exterior Acrylic Latex Finish**APPLICATION INFORMATION**

Mixing: Mix thoroughly before use. Mixing blades should be 1/3 the diameter of the paint vessel. The mixing blade should be at least 10 cm (4 in.) from the bottom of the vessel. The goal is to generate axial flow – or a rolling doughnut effect. Simple circular paint flow within a vessel will not generate a well-mixed product. Poor mixing can cause colour change within a paint run as well as varying degrees of paint hiding and performance.

Application Equipment: MACHINECOAT Plus Exterior Finish is formulated to be applied by Authorized Machine Operators and should be applied using approved equipment under specific conditions. Contact your PPG Technical Service Department for any additional application guidelines and assistance.

Thinning: Thinning is not recommended.

General Application Requirements

Substrate and air temperature must be above 10°C (50°F). Paint temperature must be at least 15°C (60°F). Paint must be mixed thoroughly – see mixing instructions.

If possible, pre-heat substrate to 38 - 60°C (100 - 140°F) board surface temperature (BST) for up to 2.5 minutes. Apply 6 - 8 mils (152 - 203 microns) wet – depending on application equipment. Dry mils required 1.9 - 2.5 mils (48 - 64 microns).

*Wet mils applied must result in dry mils required.

A one coat system may be applied in two passes by flood or brush coater, spray, or vacuum coater.

Product may be air dried or force cured by convection oven or convection oven with IR assist (BST 49 - 60°C (120 - 140°F)). Cool to less than 38°C (100°F) before slip sheet and stacking.

Additional Specific Application Conditions

In all applications, the measurement of the wet mils applied may be affected by the application equipment. A minimum dry film build of 1.9 mils (48 microns) is required for a one coat warranty. A minimum of 3.8 mils (97 microns) is required for a two coat warranty. Temperature and humidity conditions require adjustments to be made to application parameters. These conditions are suggested guidelines, please contact your PPG Technical Service Department for additional assistance and to conduct a review and audit of specific line parameters. Additional wet film may be necessary in order to achieve the required dry film thickness.

Brush Coater

One Coat Application/One Pass: Apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

One Coat Application/Two Passes: Apply 3.0 - 4.0 mils (76 - 102 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 2.5 to 3.5 minutes depending on oven temperature. Cool down 20 to 30 seconds; apply second pass of 3.0 - 4.0 mils (76 - 102 microns) wet; oven cure at 63 - 93°C (145 - 200°F) for a minimum of 4 minutes to achieve a BST of 49 - 60°C (120 - 140°F). Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

Two Coat Application: Apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. The second coat may be applied immediately by a second inline coater or the boards may be brought around to the beginning of the line and run through again. Again, apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

Spray Coater

Spray tip recommendation: 0.017 or 0.019 spray tips – evaluate spray pattern before coating to verify that fan width is appropriate and no fingering is visible.

One Coat Application/One Pass: Apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

One Coat Application/Two Passes: Apply 3.0 - 4.0 mils (76 - 102 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 2.5 to 3.5 minutes depending on oven temperature. Cool down 20 to 30 seconds; apply second pass of 3.0 - 4.0 mils (76 - 102 microns) wet; oven cure at 63 - 93°C (145 - 200 °F) for a minimum of 4 minutes to achieve a BST of 49 - 60°C (120 - 140°F). Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

Two Coat Application: Apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. The second coat may be applied immediately by a second inline coater or the boards may be brought around to the beginning of the line and run through again. Again, apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

MACHINECOAT Plus Exterior Acrylic Latex Finish**APPLICATION INFORMATION (continued)****Vacuum Coater***

The vacuum pressure pulled will be dependent on the vacuum system in use. The operator will need to work with the PPG Technical Service Department to determine the appropriate settings.

One Coat Application/One Pass: Apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

One Coat Application/Two Passes: Apply 3.0 - 4.0 mils (76 - 102 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 2.5 to 3.5 minutes depending on oven temperature. Cool down 20 to 30 seconds; apply second pass of 3.0 - 4.0 mils (76 - 102 microns) wet; oven cure at 63 - 93°C (145 - 200°F) for a minimum of 4 minutes to achieve a BST of 49 - 60°C (120 - 140°F). Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

Two Coat Application: Apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. The second coat may be applied immediately by a second inline coater or the boards may be brought around to the beginning of the line and run through again. Again, apply 6 - 8 mils (152 - 203 microns) wet; flash a minimum of 30 seconds to 1 minute; oven setting of 63 - 93°C (145 - 200°F) to achieve a BST of 49 - 60°C (120 - 140°F). Time in oven 4 to 8 minutes depending on oven temperature. Cool down 3 to 4 minutes to achieve a stacking temperature of less than 38°C (100°F).

Work with the PPG Technical Service Department for assistance in establishing force cure parameters.

PRECAUTIONS

DANGER! May cause cancer. Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Repeated exposure to high vapour concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear appropriate protective gloves. Wear eye or face protection. Wear protective clothing. Emits toxic fumes when heated.

Note: These warnings encompass the product series. Prior to use, read and follow product-specific SDS and label information.

FIRST AID: Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Keep person warm and at rest. Do not induce vomiting. Check for and remove any contact lenses. If in eyes, rinse with water for 15 minutes. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners. If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. **KEEP OUT OF THE REACH OF CHILDREN.** For workplace use, an SDS is available from your retailer or by calling 1-866-660-2220. **EMERGENCY SPILL INFORMATION:** 1-514-645-1320 or 1-866-660-2220.

PPG Architectural Finishes, Inc. believes the technical data presented is currently accurate; however, no guarantee of accuracy, comprehensiveness, or performance is given or implied. Improvements in coatings technology may cause future technical data to vary from what is in this bulletin. For complete, up-to-date technical information, visit our web site or call 1-866-660-2220.

The PPG Logo is a registered trademark of PPG Industries Ohio, Inc. *MACHINECOAT* is a registered trademark of PPG Architectural Finishes, Inc.



PPG Industries, Inc.
Architectural Coatings
One PPG Place
Pittsburgh, PA 15272
www.ppgpittsburghpaints.com

PPG Architectural Coatings Canada, Inc.
2505, de la Metropole
Longueuil, QC, Canada, J4G 1E5

Technical Services 450-442-2220
1-866-660-2220
Fax: 450-679-8893
1-800-278-8893

Architect/Specifier
1-888-PPG-IDEA