September 8, 2023 (Revision of July 5, 2023)

PPG Flooring™ 431 MMA Binder Resin

Formerly known as AC313 Binder Resin

DESCRIPTION

PPG Flooring 431 Binder Resin is a 100% reactive curing acrylic resin binder coat for self-leveling, broadcasted and troweled mortar systems.

PRINCIPAL CHARACTERISTICS

- Rapid cure and return-to-service
- Allows for curing at lower temperatures
- Resistant to water and chemicals
- Good flow and leveling properties
- Good UV resistance
- High wear and chemical resistance
- Hot water resistance, ranging from 140°F (60°C) and 176°F (80°C)
- TYPICAL USES:
- Suitable for slip resistant coatings in wet areas
- Suitable for mechanical and thermal load

Notes:

- This product was previously sold as AC313 Binder Resin
- Contact your PPG representative for specific chemical resistance information

COLOR AND GLOSS LEVEL

- Product is clear as supplied.
- Color packs are available for the following colors:
- Blue, Medium Gray, Red, and Tan

BASIC DATA AT 70°F (21°C)

Data for mixed product	
Number of components	Two
Mass density	8.1 lb/US gal (1.0 kg/l)
Volume solids	94 ± 2%
VOC (Supplied)	max. 0.1 lb/US gal (approx. 7 g/l)
Recommended dry film thickness	16.0 - 20.0 mils (406 - 508 µm) per coat
Theoretical spreading rate	120 ft^2/US gal for 16.0 mils (2.9 m^2/l for 406 µm) 90 ft^2/US gal for 20.0 mils (2.2 m^2/l for 508 µm) See notes
Dry to touch	20 minutes
Dry to overcoat	20 minutes
Full cure after	55 minutes

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Data for mixed product	
Shelf life	Base: 12 months

Notes:
- Basic product data is based on final mixed product of 5 US gallons (19 L) PPG Flooring 431 MMA resin and 20 fl. oz. (591 mL) of PPG Flooring 6492 MMA Catalyst at 70°F (21°C)
- Material should be stored in dry conditions, out of direct sunlight, in unopened original factory containers, at temperatures above 50°F (10°C) and below 75°F (24°C)
- See ADDITIONAL DATA – Curing time

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Concrete

- All surfaces must be sound, dry, clean, free of oil, grease, dirt, mildew, curing compounds, loose and flaking paint, and other foreign substances
- New concrete must cure a minimum of 28 days prior to application of this product
- Prepare surface as per SSPC-SP13 guidelines
- Abrade surface to achieve a surface profile equivalent to CSP 3 to CSP 5 in accordance with ICRI 310.2R-2013

Substrate temperature and application conditions

- Substrate temperature during application should be between 30°F (-1°C) and 90°F (32°C)
- The surface temperature must be at least 5°F (3°C) above dew point
- For slabs on grade, test for moisture in accordance with ASTM F1869 (calcium chloride test)
- Vapor transmission should be less than 3 lbs./1000 sq. ft. per 24 hr period
- Maximum relative humidity during application and curing is 80%

SYSTEM SPECIFICATION

- Resin product must be mixed with PPG Flooring™ 6492 MMA Catalyst at the volumes shown below prior to applying the mixed product to the prepared substrate.

Catalyst Volumes by Temperature

- Above 70°F (21.1°C) use 3-4 fl oz (89-118 ml) of the catalyst per gallon (3.8 L) of resin
- At 60°F (15.6°C) use 4-5 fl oz (118-148 ml) of the catalyst per gallon (3.8 L) of resin
- At 50°F (10.0°C) use 5-7 fl oz (148-207 ml) of the catalyst per gallon (3.8 L) of resin
- At 40°F (4.4°C) use 7-9 fl oz (207-266 ml) of the catalyst per gallon (3.8 L) of resin
- At temperatures below 40°F (4°C), PPG Flooring™ 6493 Cold Temperature Accelerator must be added to the resin before adding the catalyst. See below for more information on using 6493 CTA.
- At 30°F (-1.1°C) use 9-10 fl oz (266-296 ml) of the Catalyst per gallon (3.8 L) of resin

Notes:
- Indicated temperatures are for the resin, the ambient air, and the prepared substrate
- Do not use less than 4 fl oz (118 ml) of catalyst by volume unless confirmed by PPG Tech Services.
- PPG Flooring 6493 Cold Temperature Accelerator will cause yellowing. Use pigmented resin to reduce the appearance of yellowing

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INSTRUCTIONS FOR USE

Preparation

- Mixing preparation is dependent on ambient, substrate, and material temperature.
- Pre-mix base component to homogenize the container. Add hardener and stir until completely dispersed. Blend at least 1-2 minutes with a slow speed (200-400 rpm) mixer
- Only mix subsets which can be processed within the pot life, due to rapid curing
- Apply immediately after mixing

Note: Under dosage may result in curing disturbances; over dosage may result in color alterations

Pot life

8 minutes at 70°F (21°C)

Note: See ADDITIONAL DATA – Pot life

Application

- Substrate must be primed first using PPG Flooring™ 920 MMA Primer. See 920 MMA primer data sheet for product details.
- Apply evenly over the surface using a notched squeegee or trowel.
- If a slip-resistant surface is desired, broadcast to excess a natural quartz sand of at least 20 mesh size at a rate of 0.25-1.25 lb/ft^2 (1.2-6.1 kg/m^2)
- Ensure good ventilation during application and curing
- Remove excess sand or flakes (with broom or vacuum) once product has cured.

Material temperature

Material temperature during application should be between 30°F (-1°C) and 90°F (32°C)

Cleaning solvent

Use lacquer thinner or MEK

Cleaning procedures

- All application equipment must be cleaned immediately after use

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ADDITIONAL DATA

Curing time for DFT up to 20.0 mils (500 µm)	
Substrate temperature	**Dry to touch**
30°F (-1°C)	40 minutes - 1 hour
40°F (4°C)	40 minutes - 1 hour
50°F (10°C)	40 minutes - 50 minutes
60°F (16°C)	30 minutes - 35 minutes
70°F (21°C)	30 minutes - 35 minutes
80°F (27°C)	25 minutes - 30 minutes

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
30°F (-1°C)	20 minutes
40°F (4°C)	20 minutes
50°F (10°C)	20 minutes
60°F (16°C)	20 minutes
70°F (21°C)	15 minutes
90°F (32°C)	10 minutes

Batching Ratios

- Typical self-leveling slurry batch:
- Resin: 1.0 gallon (3.8 L) or 8.2 lb (3.7 kg)
- Self-leveling filler: 1.0-1.5 gallon (3.8-5.7 L) or 15-22 lb (6.8-10.0 kg)
- Pigment Pack: 6.4 fl oz (189 ml)
- Catalyst: As required by temperature (see SYSTEM SPECIFICATIONS above)
- For instructions on mixing the self-leveling filler in with the base and hardener, please contact PPG Tech Services
- Should be applied at a wet thickness of 60-120 mils (1524-3048 µm)
- Contact PPG Tech Services for mix ratios if other filler material is desired.

DISCLAIMER

- For industrial or professional use only
- This product is specifically suitable for use on the substrates mentioned in this document. For application on any other substrates, please always contact your distributor for specific instructions and in order to make sure that the product performance can be safeguarded.

SAFETY PRECAUTIONS

- Read all label and Safety Data Sheet (SDS) information prior to use

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WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

REFERENCES

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SURFACE PREPARATION OF CONCRETE (FLOORS)	INFORMATION SHEET	1496

WARRANTY

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