

PPG NOVAGUARD® 6850

Formerly known as Milamar 6850 CS

DESCRIPTION

Two-component, high-performance, novolac vinyl ester coating system

PRINCIPAL CHARACTERISTICS

- Excellent chemical resistance for splash & spill areas
- Excellent adhesion to concrete and steel
- Rapid cure and return-to-service
- High film build system
- Easy to apply by spray, roller and brush
- Ultra-Low VOC (<5 g/L)
- TYPICAL USES:
- Suitable for walls, ceilings and columns
- Suitable for surfaces subjected to immersion, spills or fumes
- Interior and exterior of tanks
- Suitable for equipment and structural steel

Note: This product was previously sold as Milamar 6850 CS

COLOR AND GLOSS LEVEL

- Gray, Dark Gray, Tile Red

BASIC DATA AT 75°F (24°C)

Data for mixed product	
Number of components	Two
Volume solids	100 ± 2%
VOC (Supplied)	EPA Method 24: 0.1 lb/US gal (14.8 g/l)
Recommended dry film thickness	See note
Theoretical spreading rate	100 ft ² /US gal for 15.0 mils (100.0 m ² /l for 375 µm)
Dry to touch	6 hours
Overcoating Interval	Minimum: 6 hours Maximum: 48 hours
Full cure after	7 days

Notes:

- For fume exposure, the product should be applied at 20 - 24 mils (510 - 610 µm) total in 2 coats
- For spills/immersion service, the product should be applied at 32 - 40 mils (810 - 1015 µm) total in 3 coats
- See ADDITIONAL DATA - Curing time
- The shelf life for the unmixed components (Part A and Part B) for this product is 3 months at 70°F (21°C)
- Material should be stored in dry conditions, out of direct sunlight, and in unopened original factory containers.
- If overcoat time is exceeded, treat surface with MEK or acetone before applying additional coats.



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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Concrete

- Surface must be clean, uniform, sound, and free from contamination (such as oil, grease, rust, scale, or deposits).
- New concrete must cure a minimum of 28 days prior to application
- Prepare in accordance with SSPC SP-13 guidelines
- Surface texture of 60 grit sandpaper is desired for maximum adhesion

Metal

- Remove all rust, dirt, moisture, grease or other contaminants from the surface in accordance with SSPC SP-1
- Abrasive blast with an angular abrasive to an SSPC SP-10 cleanliness or higher. Achieve a surface profile of 4.0 mils (100 µm)

Substrate temperature and application conditions

- Substrate temperature during application and curing should be between 65°F (18°C) and 85°F (29°C).
- Do not apply if substrate temperature is below 60°F (16°C)

SYSTEM SPECIFICATION

- Primer for concrete (optional): PPG NOVAGUARD® 1900

Preparation

- For concrete surfaces, NOVAGUARD 1900 primer (formerly known as ULTRAPRIME) is recommended
- Prior to use, the temperature of all materials should be at least 70°F (21°C) for at least 48 hours
- Transfer 1/2 of Part A material to a clean container.
- Thoroughly mix remaining 1/2 of Part A material to disperse color.
- Return the portion of Part A material that was transferred to a separate container back into the original container.
- Based on temperature (see Notes section below) pour the specified amount of Part B catalyst into Part A container and mix thoroughly for 2 minutes.
- Properly mixed material will be a uniform color without light or dark spots

Notes:

- When temperature is 60°F (16°C), add 2 oz. (59 ml) Part B (catalyst) per US gallon (3.8 L)
- When temperature is 75°F (24°C), add 1.5 oz. (44 ml) of Part B (catalyst) per US gallon (3.8 L)
- When temperature is 90°F (32°C), add 1 oz. (29.6 ml) Part B (catalyst) per US gallon (3.8 L)

Pot life

20 minutes at 75°F (24°C)



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Application

- Apply by spray, brush or roller application
- If basecoat is left for more than 48 hours, the surface must be wiped down with MEK or acetone before top coating

Notes:

- Adequate ventilation must be maintained during application and curing
 - On concrete surfaces, you should first apply NOVAGUARD 1900 primer and allow to dry tack-free
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Cleaning solvent

Acetone or other solvent based cleaners

Cleaning procedures

- All application equipment must be cleaned immediately after use
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ADDITIONAL DATA

Recoat windows

- Between 12 and 48 hours at 60°F (10°C)
 - Between 6 and 48 hours at 75°F (24°C)
 - Between 3 and 48 hours at 90°F (32°C)
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Curing Times

- Product will fully harden within 6 hours at 75°F (24°C)
 - Product will be cured for spill exposure within 96 hours at 75°F (24°C)
 - Product will be cured for chemical immersion within 7 days at 75°F (24°C)
 - Curing time can be accelerated by introducing heat to the tank. Do not heat over 120°F (49°C) during curing. Only increase temperature at a rate of 20°F (11°C) per hour.
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Physical data of cured material	
Characteristic	Value
Tensile Strength (ASTM C307)	13,300 psi (92 MPa)
Compressive strength (ASTM C579)	16,000 psi (110 MPa)
Bond Strength (ASTM C321)	To concrete failure
Bond Strength (On Steel)	3,500 psi (24 MPa)
Taber Abrasion (ASTM D1044, CS-17 Wheel, 1 kg load, 1000 cycles)	12 mg loss
Impact Strength	100 in/lb (5.6 m/kg)
Operating temperature maximum, wet	190°F (87.8°C)
Operating temperature maximum, dry	300°F (148.9°C)

Note: The value ranges stated in this Technical Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

Product Qualifications

- Compliant with USDA Incidental Food Contact Requirements

DISCLAIMER

- PPG Protective & Marine Coatings does not accept any responsibility or liability for any odor, taste or contamination imparted to the drinking water from the coatings or products retained in the coating
- 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
- Care should be taken to prevent eye and skin contact
- Adequate ventilation to remove solvent must be maintained during application and curing
- Never seal a container of mixed Part A and B as the continuing exothermic reaction may cause container to explode
- Contains styrene monomer, which will give off an odor during application
- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, as well as contact between the wet paint and exposed skin or eyes

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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

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| • EXPLANATION TO PRODUCT DATA SHEETS | INFORMATION SHEET | 1411 |
| • SURFACE PREPARATION OF CONCRETE (FLOORS) | INFORMATION SHEET | 1496 |

WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. **THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG.** Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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