

SIGMAFAST™ 210 HS

DESCRIPTION

Two-component, high solids, high-build zinc phosphate polyurethane primer/finish

PRINCIPAL CHARACTERISTICS

- Fast curing
- Specially designed for in-shop application
- Easy application by airless spray
- Unlimited recoatable
- Good adhesion to steel and galvanized steel
- Good resistance to atmospheric exposure
- Good color and gloss retention
- Cures down to -5°C (23°F)
- Drying and curing times can be reduced significantly using PPG 866M ACCELERATOR

COLOR AND GLOSS LEVEL

- A wide range of colors is available through PPG colornet tinting system
- Semi-gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.5 kg/l (12.5 lb/US gal)
Volume solids	67 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 233.0 g/kg max. 349.0 g/l (approx. 2.9 lb/US gal)
Recommended dry film thickness	50 - 150 µm (2.0 - 6.0 mils)
Theoretical spreading rate	8.9 m ² /l for 75 µm (358 ft ² /US gal for 3.0 mils) 6.7 m ² /l for 100 µm (269 ft ² /US gal for 4.0 mils)
Dry to touch	1.5 hours
Overcoating Interval	Minimum: 6 hours Maximum: Unlimited
Full cure after	4 days
Shelf life	Base: at least 24 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:

- See ADDITIONAL DATA - Spreading rate and film thickness
- See ADDITIONAL DATA - Overcoating intervals
- See ADDITIONAL DATA - Curing time



SIGMAFAST™ 210 HS

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Steel

- Steel; blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 1.8 mils), or powertool cleaned to ISO-St3
-

Galvanized steel

- Surface must be dry and free from any contamination
 - Surface should be sufficiently roughened (e.g. sandpapering, sweep blasting)
-

Substrate temperature

- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
 - Substrate temperature during application and curing down to -5°C (23°F) is acceptable; provided the substrate is free from ice and dry
 - Relative humidity during application and curing should not exceed 85%
-

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 9:1

- The temperature of the mixed base and hardener should be above 10°C (50°F), otherwise extra thinner may be required to obtain application viscosity
 - Adding too much thinner results in reduced sag resistance and slower cure
 - Thinner should be added after mixing the components
-

Pot life

3 hours at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life
-

SIGMAFAST™ 210 HS

Air spray

Recommended thinner

THINNER 21-06

Volume of thinner

5 - 10%, depending on required thickness and application conditions

Nozzle orifice

1.0 - 1.5 mm (approx. 0.040 - 0.060 in)

Nozzle pressure

0.3 - 0.4 MPa (approx. 3 - 4 bar; 44 - 58 p.s.i.)

Airless spray

Recommended thinner

THINNER 21-06

Volume of thinner

0 - 5%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.46 mm (0.018 in)

Nozzle pressure

15.0 MPa (approx. 150 bar; 2176 p.s.i.)

Brush/roller

Recommended thinner

THINNER 21-06

Volume of thinner

0 - 5%

Cleaning solvent

- THINNER 90-53
-

SIGMAFAST™ 210 HS

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
75 µm (3.0 mils)	8.9 m ² /l (358 ft ² /US gal)
100 µm (4.0 mils)	6.7 m ² /l (269 ft ² /US gal)
150 µm (6.0 mils)	4.5 m ² /l (179 ft ² /US gal)

Overcoating interval for DFT up to 120 µm (4.7 mils)						
Overcoating with...	Interval	-5°C (23°F)	0°C (32°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)
itself and two-component polyurethane finishes	Minimum	24 hours	18 hours	8 hours	6 hours	4 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited

Overcoating interval with PPG 866M ACCELERATOR for DFT up to 120 µm (4.7 mils)						
Overcoating with...	Interval	-5°C (23°F)	0°C (32°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)
itself and two-component polyurethane finishes	Minimum	20 hours	16 hours	6 hours	4 hours	3 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited

Note:

- Surface should be dry and free from any contamination

Curing time for DFT up to 120 µm (4.7 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
-5°C (23°F)	10 hours	28 hours	15 days
0°C (32°F)	6 hours	18 hours	11 days
5°C (41°F)	3 hours	11 hours	8 days
10°C (50°F)	2.5 hours	5 hours	5 days
20°C (68°F)	1.5 hours	4 hours	4 days
30°C (86°F)	1 hour	3 hours	3 days



SIGMAFAST™ 210 HS

Curing time with PPG 866M ACCELERATOR for DFT up to 120 µm (4.7 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
-5°C (23°F)	8 hours	24 hours	15 days
0°C (32°F)	5 hours	15 hours	11 days
5°C (41°F)	2.5 hours	8 hours	8 days
10°C (50°F)	2 hours	3 hours	5 days
20°C (68°F)	1 hour	2 hours	4 days
30°C (86°F)	45 minutes	1.5 hours	3 days

Notes:

- Adequate ventilation must be maintained during application and curing
- Premature exposure to early condensation and rain may cause color and gloss change

Pot life (at application viscosity)	
Mixed product temperature	Pot life
10°C (50°F)	4 hours
20°C (68°F)	3 hours
30°C (86°F)	1 hour

Note:

- Mixing this product with PPG 866M ACCELERATOR will not affect the pot life

SAFETY PRECAUTIONS

- See Safety Data Sheet and product label for complete safety and precaution requirements
- This is a solvent-borne paint and care should be taken to avoid inhalation of spray mist or vapor, as well as contact between the wet paint and exposed skin or eyes

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & 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

- Information sheet | Explanation of product data sheets



SIGMAFAST™ 210 HS

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.

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.

