PPG SIGMAFAST™ 278 D

(Sigmafast 278 bases with Sigmafast 278 D hardener)

DESCRIPTION

Two-component, high solids, zinc phosphate epoxy primer and buildcoat

PRINCIPAL CHARACTERISTICS

- Epoxy primer or buildcoat in protective coating systems
- Excellent corrosion resistance in atmospheric exposure
- Cures at temperatures down to -5°C (23°F)
- Speed curing in steel fabrication
- Easy application by airless spray
- Wide application range
- ACQPA 27962-certified

COLOR AND GLOSS LEVEL

- Selected range of colors available
- Semi-gloss

Notes:

- Epoxy coatings will chalk and fade upon exposure to sunlight, elevated temperatures, or chemical exposure. Discoloration and normal chalking do not impact performance. Light colors will darken over time. Some batch-to-batch variation in color is to be expected. Color matches are approximate.
- The addition of a UV stable topcoat should be considered when using epoxy coatings in cosmetic areas

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	80 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 153.0 g/kg UK PG 6/23(92) Appendix 3: max. 230.0 g/l (approx. 1.9 lb/US gal) EPA Method 24: 220.0 g/ltr (1.8 lb/USgal)
Recommended dry film thickness	75 - 250 µm (3.0 - 10.0 mils)
Theoretical spreading rate	6.4 m^2/l for 125 µm (257 ft^2/US gal for 5.0 mils)
Dry to touch	2 hours
Overcoating Interval	Minimum: 2 hours
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:

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

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Apply this product to the specified thickness as soon as possible after the surface is prepared

Substrate conditions

- Steel; blast cleaned to ISO Sa2½ or minimum SSPC SP6, blasting profile 40 – 70 µm (1.6 – 2.8 mils) or power tool cleaned to minimum ISO St3 / SSPC SP3

Primed steel or previous coat

- Previous suitable coat must be dry and free from any contamination
- Surface of previous coat should be sufficiently roughened if necessary
- When applied to zinc silicate, a mist coat and full coat technique is required

Galvanized steel

- The surface must be properly prepared, dry, clean and free of any contamination
- The surface should be sufficiently roughened by sweep blasting to achieve a uniform matt appearance
- Sweep blast in accordance with the SSPC SP16 guidelines

Stainless steel

- The surface must be properly prepared, dry, clean and free of any contamination
- The surface should be sufficiently roughened by sweep blasting with inert non-metallic abrasives
- Sweep blast in accordance with the SSPC SP16 guidelines

Thermal Sprayed Metallization (TSM)

- Surface must be dry and free from any contamination
- The mist coat / full coat technique is required. See mist coat thinning recommendation in the Instructions For Use part below

Concrete

- Dried for at least 28 days in good ventilation conditions
- Moisture content should not exceed 4.5%
- Concrete must be sound, dry, free from laitance and any contamination
- Surface should be sufficiently roughened

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Substrate temperature and application conditions

- 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 3:1

- The temperature of the paint should preferably be above 15°C (59°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

1 hour at 20°C (68°F)

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 10%, depending on required thickness and application conditions

Nozzle orifice

1.7 – 2.0 mm (approx. 0.070 – 0.079 in)

Nozzle pressure

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

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Airless spray

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 10%, 30 - 50% when mist coat applied

Nozzle orifice

Approx. 0.46 – 0.53 mm (0.018 – 0.021 in)

Nozzle pressure

20.0 - 25.0 MPa (approx. 200 - 250 bar; 2901 - 3626 p.s.i.)

Brush/roller

Recommended thinner

THINNER 91-92

Volume of thinner

0 – 5%

Notes:

- A roller suitable for epoxy application must be used
- Application by roller will leave roller marking and is suitable for minimum DFT requirements only
- Application by brush may show brush marking, due to the thixotropic nature of the paint and is most suitable to small areas, tight angle areas or for stripe coating or touch-up

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Cleaning solvent

- THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
75 µm (3.0 mils)	10.7 m^2/l (428 ft^2/US gal)
125 µm (5.0 mils)	6.4 m^2/l (257 ft^2/US gal)
250 µm (10.0 mils)	3.2 m^2/l (128 ft^2/US gal)

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Overcoating interval for DFT up to 125 µm (5.0 mils)						
Overcoating with...	**Interval**	**-5°C (23°F)**	**0°C (32°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**
various epoxy and polyurethane coatings	Minimum Maximum	24 hours Extended	14 hours Extended	4 hours Extended	2 hours Extended	1 hour Extended
PSX 700	Minimum Maximum	24 hours 2 months	14 hours 1.5 month	4 hours 1 month	2 hours 7 days	1 hour 7 days

Notes:

- Actual maximum overcoating times will be influenced by local conditions
- The surface must be dry and free from all contaminations (oil, grease, chalking, etc...) which would require cleaning and/or abrading

Curing time for DFT up to 125 µm (5.0 mils)			
Substrate temperature	**Dry to touch**	**Dry to handle**	**Full cure**
-5°C (23°F)	16 hours	38 hours	N/A
0°C (32°F)	11 hours	24 hours	21 days
10°C (50°F)	4 hours	8 hours	8 days
20°C (68°F)	2 hours	4 hours	4 days
30°C (86°F)	1 hour	2 hours	3 days

Note:

- Adequate ventilation must be maintained during application and curing

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
0°C (32°F)	10 hours
10°C (50°F)	3 hours
20°C (68°F)	1 hour
30°C (86°F)	30 minutes

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

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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

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