SIGMAFAST™ 220

DESCRIPTION

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

PRINCIPAL CHARACTERISTICS

- Specially designed for in-shop application
- Fast-curing
- Easy application by airless spray
- Unlimited recoatable
- Good adhesion to steel and galvanized steel
- Cures at temperatures down to -5°C (23°F)
- Non-chalking, non-yellowing

COLOR AND GLOSS LEVEL

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

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.3 kg/l (10.8 lb/US gal)
Volume solids	54 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 275.0 g/kg max. 395.0 g/l (approx. 3.3 lb/US gal)
Recommended dry film thickness	80 - 120 µm (3.1 - 4.7 mils) depending on system
Theoretical spreading rate	6.8 m^2/l for 80 µm (279 ft^2/US gal for 3.1 mils) 4.5 m^2/l for 120 µm (184 ft^2/US gal for 4.7 mils)
Dry to touch	1 hour
Overcoating Interval	Minimum: 4 hours Maximum: Unlimited
Full cure after	4 days
Shelf life	Base: at least 24 months when stored cool and dry Hardener: at least 36 months when stored cool and dry

Notes:
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel; blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils)

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 88:12

- 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

Induction time

None

Pot life

2.5 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

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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

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ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
80 µm (3.1 mils)	6.8 m^2/l (279 ft^2/US gal)
120 µm (4.7 mils)	4.5 m^2/l (184 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	16 hours	6 hours	4 hours	2 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 handle**	**Full cure**
-5°C (23°F)	24 hours	15 days
0°C (32°F)	16 hours	11 days
10°C (50°F)	4 hours	5 days
20°C (68°F)	3 hours	4 days
30°C (86°F)	2 hours	3 days

Notes:
- Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)
- 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)	2.5 hours
30°C (86°F)	1.5 hours

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- 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 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
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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