

SIGMACOVER™ 522

DESCRIPTION

Two-component, micaceous iron oxide-pigmented, polyamide-cured epoxy primer/sealer/coating

PRINCIPAL CHARACTERISTICS

- Excellent adhesion to, and sealing of, weathered-, cleaned-, zinc-rich primers and metal-sprayed steel
- Good adhesion to properly pretreated galvanized steel
- Can be used in systems for atmospheric or water-immersed exposure conditions
- Good resistance to industrial- or chemical-contaminated atmospheric exposure conditions
- Good abrasion and impact resistance
- Pass cryogenic cyclic test from -196°C (-321°F) to 140°C (284°F)
- Resistant to temperatures up to 200°C (390°F) in dry atmospheric exposure conditions

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.8 kg/l (15.0 lb/US gal)
Volume solids	60 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 210.0 g/kg max. 374.0 g/l (approx. 3.1 lb/US gal)
Recommended dry film thickness	40 - 100 µm (1.6 - 4.0 mils) depending on system
Theoretical spreading rate	15.0 m ² /l for 40 µm (602 ft ² /US gal for 1.6 mils) 6.0 m ² /l for 100 µm (241 ft ² /US gal for 4.0 mils)
Dry to touch	2 hours
Overcoating Interval	Minimum: 8 hours Maximum: 1 month
Full cure after	7 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

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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)
 - Shop primed steel; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3
 - Zinc rich epoxies and zinc silicates must be dry and free from any contamination
 - Galvanized steel; for atmospheric exposure conditions disc sanding, and for water immersed exposure conditions sweep blasting is required
 - Stainless steel, non-ferrous metal should be sufficiently roughened by light sanding
 - Compatible previous coat must be dry and free from any contamination
 - When used as an adhesion primer or when a long overcoating interval is expected a maximum DFT of 50 µm (2.0 mils) must be specified in order to preserve the rough texture
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Substrate temperature

- Substrate temperature during application and curing should be above 10°C (50°F)
 - Ambient temperature during application at 5°C (41°F) is acceptable; however curing to hardness takes longer and complete cure will be reached when the temperature increases
 - Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 4.56:1

- The temperature of the mixed base and hardener 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
 - Thinner should be added after mixing the components
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Pot life

8 hours at 20°C (68°F)

Note:

- See ADDITIONAL DATA – Pot life
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Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

10 - 30%, depending on required thickness and application conditions

Nozzle orifice

1.5 - 2.0 mm (approx. 0.060 - 0.079 in)

Nozzle pressure

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

Airless spray

Recommended thinner

THINNER 91-92

Volume of thinner

5 - 10%, 30 - 40% when mist coat applied

Nozzle orifice

Approx. 0.48 - 0.53 mm (0.019 - 0.021 in)

Nozzle pressure

12.0 - 15.0 MPa (approx. 120 - 150 bar; 1741 - 2176 p.s.i.)

Brush/roller

Recommended thinner

THINNER 91-92

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
40 µm (1.6 mils)	15.0 m ² /l (602 ft ² /US gal)
100 µm (4.0 mils)	6.0 m ² /l (241 ft ² /US gal)

Overcoating interval for DFT up to 2.0 mils (50 µm)						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
two-component epoxies and polyurethanes	Minimum	36 hours	16 hours	8 hours	6 hours	4 hours
	Maximum	6 months	6 months	6 months	3 months	3 months

Overcoating interval for DFT up to 100 µm (4.0 mils)						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
two-component epoxies and polyurethanes	Minimum	3 days	32 hours	16 hours	12 hours	8 hours
	Maximum	28 days	28 days	28 days	14 days	7 days

Notes:

- Surface should be dry and free from any contamination
- The minimum overcoating time should be multiplied by 5 when SIGMACOVER 522 is to be applied on top of an existing old (alkyd) primer or coating
- Glossy finishes require a corresponding undercoat



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Curing time for DFT up to 100 µm (4.0 mils)			
Substrate temperature	Dry to touch	Dry to handle	Full cure
5°C (41°F)	8 hours	18 hours	N/A
10°C (50°F)	5 hours	8 hours	15 days
15°C (59°F)	3.5 hours	6 hours	10 days
20°C (68°F)	2 hours	4 hours	7 days
25°C (77°F)	1.5 hours	4 hours	5 days

Notes:

- Adequate ventilation must be maintained during application and curing
- For optimum resistance in tank coating systems a minimum substrate temperature of 10°C (50°F) is essential

Pot life (at application viscosity)	
Mixed product temperature	Pot life
15°C (59°F)	10 hours
20°C (68°F)	8 hours
25°C (77°F)	6 hours
30°C (86°F)	5 hours
35°C (95°F)	4 hours

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



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