New Guard Coatings Group

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April 17, 2018 (Revision of February 23, 2017)

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
- Prevents Corrosion Under Insulation (CUI)

COLOR AND GLOSS LEVEL

- Redbrown, greenish gray
- Low metallic sheen

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 1999/13/EC, 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

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

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 82:18

- 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

Induction time

None

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%

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)

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Overcoating interval for DFT up to 50 µm (2.0 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	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
- Surface should be properly cleaned
- Glossy finishes require a corresponding undercoat

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 (please refer to INFORMATION SHEETS 1433 and 1434)
- 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

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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

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
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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