December 16, 2021 (Revision of April 18, 2018)

SIGMACOVER™ 690

DESCRIPTION

Two-component high solids aluminum pigmented polyamine cured modified epoxy primer/coating

PRINCIPAL CHARACTERISTICS

- Primer/coating designed for maintenance
- Low VOC
- Good flow properties
- Self priming coating tolerant to lower grades of steel preparation
- Compatible with most aged, good adhering coatings
- Good recoatability with epoxy and polyurethane paints
- Good curing at temperatures down to 5°C (41°F)
- Good impact and abrasion resistance
- If the substrate temperature drops below 5°C (41°F) until 0°C (32°F), the wintergrade type should be used (see 7414WG)

COLOR AND GLOSS LEVEL

- Aluminum light and dark
- Semi-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	90 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 150.0 g/kg UK PG 6/23(92) Appendix 3: max. 198.0 g/l (approx. 1.7 lb/US gal)
Recommended dry film thickness	75 - 125 µm (3.0 - 5.0 mils) depending on system
Theoretical spreading rate	12.0 m^2/l for 75 µm (481 ft^2/US gal for 3.0 mils) 7.2 m^2/l for 125 µm (289 ft^2/US gal for 5.0 mils)
Dry to touch	4 hours
Overcoating Interval	Minimum: 12 hours Maximum: 4 months
Full cure after	5 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

Atmospheric exposure conditions

- Steel; blast cleaned to ISO-Sa2 or power tool cleaned to ISO-St2 for good corrosion protection
- Steel with approved shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt2
- Existing sound coating systems; sufficiently roughened, dry and cleaned

Immersion in water

- Steel; blast cleaned to ISO-Sa2½
- Steel with approved zinc silicate shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3

Substrate temperature

- Substrate temperature during application and curing should be above 5°C (41°F)
- 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 77.5:22:5

- 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 and slower cure
- Thinner should be added after mixing the components

Induction time

None

Pot life

3 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

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

Nozzle orifice

1.8 – 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 - 5%, depending on required thickness and application conditions

Nozzle orifice
Approx. 0.48 – 0.53 mm (0.019 – 0.021 in)

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

Brush/roller

Recommended thinner
THINNER 91-92

Volume of thinner
0 – 5%

Cleaning solvent
THINNER 90-53

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
75 µm (3.0 mils)	12.0 m^2/l (481 ft^2/US gal)
100 µm (4.0 mils)	9.0 m^2/l (361 ft^2/US gal)
125 µm (5.0 mils)	7.2 m^2/l (289 ft^2/US gal)

Overcoating interval for DFT up to 125 µm (5.0 mils)							
Overcoating with...	**Interval**	**5°C (41°F)**	**10°C (50°F)**	**15°C (59°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum	48 hours	36 hours	20 hours	12 hours	8 hours	6 hours
	Maximum	6 months	6 months	6 months	4 months	3 months	3 months

Notes:
- Surface should be dry and free from any contamination
- For polyurethane paints the minimum overcoating time should be raised with 50%

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Curing time for DFT up to 125 µm (5.0 mils)			
Substrate temperature	**Dry to touch**	**Dry to handle**	**Full cure**
5°C (41°F)	16 hours	48 hours	10 days
10°C (50°F)	9 hours	36 hours	7 days
15°C (59°F)	6 hours	20 hours	6 days
20°C (68°F)	4 hours	12 hours	5 days
30°C (86°F)	3 hours	8 hours	4 days
40°C (104°F)	2 hours	6 hours	48 hours

Note: Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
15°C (59°F)	5 hours
20°C (68°F)	3 hours
30°C (86°F)	2 hours
40°C (104°F)	1 hour
50°C (122°F)	1 hour

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

• 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

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