

SIGMA EP 112 MIOCOAT

DESCRIPTION

Two-component, high solids micaceous iron oxide pigmented polyamine cured recoatable epoxy coating

PRINCIPAL CHARACTERISTICS

- General-purpose epoxy buildcoat in protective coating systems, for steel and concrete structures exposed to atmospheric land or marine conditions
- Good adhesion characteristics for subsequent coats
- Free from lead- and chromate-containing pigments
- Excellent durability
- Easy application, both by airless spray and brush
- VOC compliant
- Resistant to temperatures up to 200°C (390°F) in dry atmospheric exposure conditions
- Approved Network Rail RT 98 item 7.2.1
- Registered as Highway Agency item 112

COLOR AND GLOSS LEVEL

- Dark gray, light gray
- Eggshell

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	70 ± 2%
VOC (Supplied)	UK PG 6/23(92) Appendix 3: max. 245.0 g/l (approx. 2.0 lb/US gal)
Recommended dry film thickness	75 - 150 µm (3.0 - 6.0 mils) depending on system
Theoretical spreading rate	7.0 m ² /l for 100 µm (281 ft ² /US gal for 4.0 mils)
Dry to touch	2 hours
Overcoating Interval	Minimum: 8 hours Maximum: 6 months
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
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Substrate temperature and application conditions

- 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
 - Relative humidity during application and curing should not exceed 85%
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 80:20 (4:1)

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

6 hours at 20°C (68°F)

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

10 - 15%, depending on required thickness and application conditions

Nozzle orifice

1.5 - 3.0 mm (approx. 0.060 - 0.110 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

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

Nozzle orifice

Approx. 0.48 – 0.58 mm (0.019 – 0.023 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)	9.3 m ² /l (374 ft ² /US gal)
100 µm (4.0 mils)	7.0 m ² /l (281 ft ² /US gal)
150 µm (6.0 mils)	4.7 m ² /l (187 ft ² /US gal)

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)
itself	Minimum	36 hours	16 hours	8 hours	6 hours	4 hours
	Maximum	6 months	6 months	6 months	3 months	1 month

Note: For polyurethane paints the minimum overcoating time should be raised with 100%

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Curing time for DFT up to 100 µm (4.0 mils)		
Substrate temperature	Dry to handle	Full cure
5°C (41°F)	18 hours	21 days
10°C (50°F)	8 hours	15 days
15°C (59°F)	6 hours	10 days
20°C (68°F)	4 hours	7 days
25°C (77°F)	4 hours	5 days

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

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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