



New Guard Coatings Group

A global reputation to protect.

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This information is not exhaustive and it is the user's responsibility to ensure that this data sheet is the most current by contacting their local New Guard Coatings Group branch prior to using the coating/product.

www.newguardcoatings.com

NORTH • SOUTH EAST • MIDLANDS • NORTH WEST • HULL • SCOTLAND

SIGMA EP 111 PRIMER

4 pages

August 2012
Revision of July 2010

Description two component high solids polyamide cured recoatable zinc phosphate epoxy primer

- PRINCIPAL CHARACTERISTICS**
- general purpose epoxy primer or build coat in protective coating systems for steel and concrete structures in atmospheric exposure
 - can be recoated with various two component and conventional coatings even after long weathering periods
 - free from lead and chromate containing pigments
 - excellent rust preventing properties in industrial or coastal atmospheres
 - tough with long term flexibility
 - cures at temperatures down to -5°C
 - excellent adhesion to steel
 - easy application, both by airless spray and brush
 - VOC compliant
 - registered as Highway Agency item 111
 - approved Network Rail RT 98

COLOURS AND GLOSS cream – eggshell

BASIC DATA AT 20 °C (1 g/cm³ = 8.35 lb/US gal; 1 m²/l = 40.7 ft²/US gal)
(data for mixed product)

Mass density 1.4 g/cm³
 Volume solids 68% ± 2%
 VOC (UK PG 6/23(92) appendix 3) max. 214 g/l (approx. 1.8 lb/gal)
 (UK PG 6/23(92) Appendix 3)
 Recommended dry film thickness 75 - 150 µm depending on system
 Theoretical spreading rate 6.8 m²/l for 100 µm *
 Touch dry after 4 hours at 20 °C

Overcoating interval min. 8 hours *
 max. 6 months
 Full cure after 4 days * at 20 °C
 (data for components)

Shelf life (cool and dry place) at least 12 months
 * see additional data

- RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES**
- steel; blast cleaned to ISO-Sa2½
 - during application and curing a substrate temperature down to -5°C is acceptable provided substrate is dry and free from any contamination
 - substrate temperature at least 3°C above dew point
 - maximum relative humidity during application and curing is 85%

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mixing ratio by volume: base to hardener 80 : 20

INSTRUCTIONS FOR USE

- the temperature of the mixed base and hardener should preferably be above 15°C, otherwise extra solvent may be required to obtain application viscosity
- too much solvent results in reduced sag resistance and slower cure
- thinner should be added after mixing the components

Pot life

4 hours at 20 °C
*see additional data

AIR SPRAY

Recommended thinner
Volume of thinner
Nozzle orifice
Nozzle pressure

Thinner 91-92
0 - 10%, depending on required thickness and application conditions
1.5 - 3 mm
0.3 - 0.4 MPa (= approx. 3 - 4 bar; 44 - 58 p.s.i.)

AIRLESS SPRAY

Recommended thinner
Volume of thinner
Nozzle orifice
Nozzle pressure

Thinner 91-92
0 - 5%, depending on required thickness and application conditions
approx. 0.48 mm (= 0.019 in)
15 MPa (= approx. 150 bar; 2176 p.s.i.)

BRUSH/ROLLER

Recommended thinner
Volume of thinner

Thinner 91-92
0 - 5%

CLEANING SOLVENT

- Thinner 90-53

Film thickness and spreading rate

theoretical spreading rate m ² /l	9.1	6.8	4.5
dft in µm	75	100	150

Overcoating table for Sigma EP 111 Primer

substrate temperature	-5°C	5°C	10°C	20°C	30°C	40°C
minimum interval	48 hours	20 hours	16 hours	8 hours	6 hours	4 hours
maximum interval	6 months					

- for polyurethane paints the minimum overcoating time should be raised with 100%

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Curing

Curing table for Sigma EP 111 Primer for dft up to 100 µm

substrate temperature	full cure	dry to handle
-5°C	14 days	24 - 48 hours
0°C	10 days	24 - 30 hours
5°C	8 days	18 - 24 hours
10°C	6 days	18 hours
15°C	5 days	12 hours
20°C	4 days	8 hours
30°C	3 days	6 hours
40°C	2 days	4 hours

- adequate ventilation must be maintained during application and curing (please refer to sheets 1433 and 1434)

Worldwide availability

Whilst it is always the aim of Sigma Coatings to supply the same product on a worldwide basis, 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	see information sheet 1411
Safety indications	see information sheet 1430
Safety in confined spaces and health safety	
Explosion hazard - toxic hazard	see information sheet 1431
Safe working in confined spaces	see information sheet 1433
Directives for ventilation practice	see information sheet 1434
Cleaning of steel and removal of rust	see information sheet 1490

SAFETY PRECAUTIONS

- for paint and recommended thinners see safety 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 vapour as well as contact between the wet paint and exposed skin or eyes

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The English text of this data sheet shall prevail over any translation thereof.

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