

SIGMAPRIME 200 SERIES



5 pages

May 2009
Revision of June 2008

DESCRIPTION	two component multi purpose polyamide cured anticorrosive epoxy system	
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none"> - universal epoxy priming system suitable for all vessel areas - excellent anticorrosive properties and water resistance - surface tolerant, pure epoxy primer with good abrasion and chemical resistance - excellent adhesion to steel, shop primer, galvanised steel and non ferrous metals - excellent recoatability - suitable for application and curing in a wide range of climatic conditions - suitable for bulk supply and twin feed application 	
COLOURS AND GLOSS	grey, yellow/green (redbrown for SigmaPrime 200 K) - eggshell	
BASIC DATA AT 20°C	(1 g/cm ³ = 8.25 lb/US gal; 1 m ² /l = 40.7 ft ² /US gal) (data for mixed product)	
	SigmaPrime 200:	SigmaPrime 200 K:
Mass density	1.3 g/cm ³	1.4 g/cm ³
Volume solids	57 ± 2%	60 ± 2%
VOC (supplied)	max. 326 g/kg (Directive 1999/13/EC, SED)	max. 287 g/kg (Directive 1999/13/EC, SED)
	max. 430 g/l (approx. 3.6 lb/gal)	max. 392 g/l (approx. 3.3 lb/gal)
Recommended dry film thickness	75 - 200 µm depending on system	100 - 200 µm depending on system
Theoretical spreading rate	7.6 m ² /l for 75 µm, 2.9 m ² /l for 200 µm *	6 m ² /l for 100 µm, 3 m ² /l for 200 µm *
Touch dry after	1.5 hour	
Overcoating interval	min. see tables * max. see tables *	
Curing time	7 days *	
	(data for components)	
Shelf life (cool and dry place)	at least 24 months * see additional data	
RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES	<ul style="list-style-type: none"> - for immersion exposure: <ul style="list-style-type: none"> • steel or steel with not approved zinc silicate shop primer; blast cleaned (dry or wet) to ISO-Sa2½, blasting profile 30 - 75 µm • steel with approved zinc silicate shop primer; weld seams and areas of damaged shop primer or breakdown should be blast cleaned to ISO-Sa2½, blasting profile 30 - 75 µm or power tool cleaned to SPSS-Pt3 - IMO-MSC.215(82) Requirements for Water Ballast Tanks: <ul style="list-style-type: none"> • steel; ISO 8501-3:2006 grade P2, with all edges treated to a rounded radius of minimum 2 mm or subject to three pass grinding • steel or steel with not approved zinc silicate shop primer; blast cleaned to ISO-Sa2½, blasting profile 30 - 75 µm 	

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- steel with approved zinc silicate shop primer; weld seams and areas of damaged shop primer or breakdown should be blast cleaned to ISO-Sa2½, blasting profile 30 - 75 µm
 - for shop primer with IMO type approval; no additional requirements
 - for shop primer without IMO type approval; blast cleaned to ISO-Sa2 removing at least 70% of intact shop primer, blasting profile 30 - 75 µm
- dust quantity rating "1" for dust size class "3", "4" or "5", lower dust size classes to be removed if visible on the surface to be coated without magnification (ISO 8502-3:1992)
 - **for atmospheric exposure conditions:**
 - steel; blast cleaned to ISO-Sa2½, blasting profile 30 - 75 µm or according to ISO-St3
 - shop primed steel; pretreated to SPSS-Pt3
 - galvanised steel; cleaned from grease, salts, contamination and roughened up
 - previous coat; (e.g. SigmaPrime 200) dry and free from any contamination
 - substrate temperature should be above 5°C and at least 3°C above dew point during application and curing
 - maximum relative humidity during application and curing is 85%

SYSTEM SPECIFICATION

marine system sheets: 3101, 3102, 3103, 3104,
3105, 3106 (spec. 2), 3107, 3108

INSTRUCTIONS FOR USE

mixing ratio by volume: base to hardener 80 : 20

- 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

Induction time

none

Pot life

7 hours at 20°C *
* see additional data

AIRLESS SPRAY

Recommended thinner

Thinner 91-92

Volume of thinner

0 - 15%, depending on required thickness and application conditions

Nozzle orifice

approx. 0.53 - 0.74 mm (= 0.021 - 0.029 in)

Nozzle pressure

15 MPa (= approx. 150 bar; 2130 p.s.i.)

AIR SPRAY

Recommended thinner

Thinner 91-92

Volume of thinner

0 - 15%, depending on required thickness and application conditions

Nozzle orifice

1.5 - 2 mm

Nozzle pressure

0.3 - 0.4 MPa (= approx. 3 - 4 bar; 43 - 57 p.s.i.)

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BRUSH/ROLLER

Recommended thinner no extra thinner needed
Volume of thinner but up to 5% Thinner 91-92 can be added if desired

CLEANING SOLVENT

Thinner 90-53

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

ADDITIONAL DATA

Film thickness and spreading rate

theoretical spreading rate m ² /l					
SigmaPrime 200	7.6	4.6	3.6	2.9	
SigmaPrime 200 K	6.0	4.8	3.8	3.0	
dft in µm	75	100	125	160	200

max. dft:

Dry Film Thickness of 2000 µm may occur occasionally (minor areas) where multiple overlapping is unavoidable (i.e. around scallops, corners, erection joint lines etc.). PPG must be consulted in case of DFT readings fall outside this recommendation

Overcoating table for SigmaPrime 200 or 200 K for dft up to 160 µm

substrate temperature	5°C	10°C	20°C	30°C	40°C
minimum interval	13 hours	6 hours	2.5 hours	1.5 hour	1 hour
maximum interval when not exposed to sunshine	6 months	6 months	6 months	4 months	3 months
maximum interval when exposed to direct sunshine	3 months	3 months	3 months	2 months	2 months

with various two pack epoxy coatings

– surface should be dry and free from any contamination

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Curing table for dft up to 160 µm

substrate temperature	touch dry	dry to handle	full cure
5°C	5 hours	14 hours	21 days
10°C	3 hours	8 hours	14 days
20°C	1.5 hour	4 hours	7 days
30°C	45 min.	2.5 hours	5 days
40°C	30 min.	1.5 hour	4 days

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

Pot life (at application viscosity)

15°C	10 hours
20°C	7 hours
30°C	4 hours

Worldwide availability

Whilst it is always the aim of PPG Protective & Marine 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
PPG Protective & Marine Coatings Ballast Tank Working Procedure New Building	

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LIMITATION OF LIABILITY

The information in this data sheet is based upon laboratory tests we believe to be accurate and is intended for guidance only. All recommendations or suggestions relating to the use of the Sigma Coatings products made by PPG Protective & Marine Coatings, whether in technical documentation, or in response to a specific enquiry, or otherwise, are based on data which to the best of our knowledge are reliable. The products and information are designed for users having the requisite knowledge and industrial skills and it is the end-user's responsibility to determine the suitability of the product for its intended use.

PPG Protective & Marine Coatings has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. PPG Protective & Marine Coatings does therefore not accept any liability arising from loss, injury or damage resulting from such use or the contents of this data sheet (unless there are written agreements stating otherwise).

The data contained herein are liable to modification as a result of practical experience and continuous product development.

This data sheet replaces and annuls all previous issues and it is therefore the user's responsibility to ensure that this sheet is current prior to using the product.

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

	PDS	7416
202391	SigmaPrime 200 yellow/green	4009002200 (202390 base, 202389 hardener)
211291	SigmaPrime 200 grey	9515052200 (211282 base, 202389 hardener)
244820	SigmaPrime 200 K grey	9515052150 (243529 base, 240992 hardener)
244832	SigmaPrime 200 K redbrown	2008002150 (243540 base, 240992 hardener)