

# SIGMAPRIME 700

4 pages

September 2005

## DESCRIPTION

two component multi purpose anticorrosive epoxy system

## PRINCIPAL CHARACTERISTICS

- general purpose epoxy primer/coating in protective coating systems for steel and non ferrous metals
- good adhesion to steel and galvanised steel
- good adhesion to non ferrous metals
- good flow and wetting properties
- good water and corrosion resistance
- cures at temperatures down to +5°C
- suitable for touching up of weld seams and damages of epoxy coatings during construction
- long recoating intervals are possible when overcoating with (various) epoxy and polyurethane coatings (under cover)
- can be overcoated with most alkyd-, chlorinated rubber-, vinyl-, epoxy- and two component polyurethane coatings
- compatible with well designed cathodic protection systems

## COLOURS AND GLOSS

grey, redbrown - eggshell

## BASIC DATA AT 20°C

(1 g/cm<sup>3</sup> = 8.25 lb/US gal; 1 m<sup>2</sup>/l = 40.7 ft<sup>2</sup>/US gal)  
 (data for mixed product)

Mass density	1.4 g/cm <sup>3</sup>
Volume solids	70 ± 2%
VOC (supplied)	max. 227 g/kg (Directive 1999/13/EC, SED) max. 313 g/l (approx. 2.6 lb/gal)
Recommended dry film thickness	100 - 200 µm depending on system
Theoretical spreading rate	7.0 m <sup>2</sup> /l for 100 µm, 3.5 m <sup>2</sup> /l for 200 µm
Touch dry after	1.5 hours
Overcoating interval	min. see tables * max. see tables *
Full cure after	7 days *

(data for components)

Shelf life (cool and dry place)	at least 12 months
Flash point	base 26°C, hardener 24.5°C

\* see additional data

# SIGMAPRIME 700

September 2005

## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- **for immersion exposure:**
  - steel; blast cleaned (dry or wet) to ISO-Sa2½
  - steel with approved zinc silicate shop primer; pretreated according to SPSS or powertool cleaned to SPSS-Pt3
- **for atmospheric exposure conditions:**
  - steel; pretreated preferably to ISO-Sa2½ or according to ISO-St3
  - shop primed steel; pretreated to SPSS-Pt3
  - galvanised steel; cleaned from grease, salts, contamination
- substrate temperature should be above 5°C and at least 3°C above dew point during application and curing
- previous coat; (e.g. SigmaPrime 700) dry and free from any contamination

## 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

8 hours at 20°C \*

\* see additional data

## AIRLESS SPRAY

Recommended thinner

Sigma thinner 91-92

Volume of thinner

0 - 10%, depending on required thickness and application conditions

Nozzle orifice

approx. 0.53 - 0.64 mm (= 0.021 - 0.025 in)

Nozzle pressure

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

## AIR SPRAY

Recommended thinner

Sigma thinner 91-92

Volume of thinner

0 - 10%, 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.)

## BRUSH/ROLLER

Recommended thinner

no extra thinner is necessary,

Volume of thinner

but up to 5% Sigma thinner 91-92 can be added if desired

## CLEANING SOLVENT

Sigma thinner 90-53

SIGMAPRIME 700

September 2005

**SAFETY PRECAUTIONS**

for paint and recommended thinners see safety sheets 1430, 1431 and relevant material safety data sheets

this is a solvent based 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 <sup>2</sup> /l	7	3.5
dft in µm	100	200

max. dft when brushing:

50 µm

**Overcoating table for various two pack epoxy paint for dft up to 150 µm**

substrate temperature	5°C	10°C	20°C	30°C	40°C
minimum interval	16 hours	12 hours	6 hours	3 hours	2 hours
maximum interval when <b>not</b> exposed to direct sunshine	6 months	6 months	6 months	4 months	3 months
maximum interval when exposed to direct sunshine	3 months	3 months	2 months	2 months	2 months
maximum interval when exposed to direct sunshine	2 months	1 month	14 days	10 days	7 days

for SigmaDur 550, alkyd and SigmaCover 456

– surface should be dry and free from any contamination

**Curing table for dft up to 150 µm**

substrate temperature	touch dry	dry to handle	full cure
5°C	6 hours	16 hours	21 days
10°C	4 hours	12 hours	14 days
15°C	3 hours	9 hours	7 days
20°C	2 hours	6 hours	5 days
30°C	1 hour	3 hours	5 days

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

SIGMAPRIME 700

September 2005

**Pot life (at application viscosity)**

15°C	10 hours
20°C	8 hours
30°C	4 hours

**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

**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 products made by Sigma 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.

Sigma 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. Sigma 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.

DS	7930
245825 redbrown	2008002150
245824 grey	9515052150