

# SIGMACAP PRICOAT 1000 (SIGMAGUARD CSF ME)

0678

Four sheet issue

May 2006

## DESCRIPTION

two component solvent free epoxy coating

## PRINCIPAL CHARACTERISTICS

- one coat protection for steel structures, giving excellent corrosion resistance
- excellent resistance against wear and tear
- good resistance to various chemicals
- suitable as a topcoat in solvent free systems, e.g. concrete sewage systems
- can be applied by heavy duty single feed airless spray equipment (60 : 1)
- eliminates explosion risk and fire hazard

## COLOUR AND GLOSS

black - gloss

## BASIC DATA AT 20 °C

( for mixed product )

Mass density

approx. 1.3g/cm<sup>3</sup>

Solids content

100% by volume

VOC (supplied)

max. 17 g/l

Recommended  
dry film thickness

300 µm

Theoretical  
spreading rate

3.3 m<sup>2</sup>/ltr for 300 µm\*

Touch dry after

approx. 8 hours

Overcoating interval

min. 24 hours\*  
max. 20 days\*

Full cure after

5 days

Shelf life (cool, dry place)

at least 12 months

Flashpoint

base and hardener above 65 °C

\* see additional data

## RECOMMENDED SUBSTRATE CONDITIONS

- steel; blast cleaned to ISO-Sa2½
- blasting profile; (Rz) 50 - 100 µm
- substrate temperature should be above 5 °C and at least 3 °C above the dew point

## SYSTEM SPECIFICATION

marine

1 x 300 µm Sigmaguard CSF

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## INSTRUCTIONS FOR USE

- mixing ratio: by volume; base to hardener 80 : 20
- the temperature of the mixed base and hardener should be above 20 °C
- at lower temperatures the viscosity will be too high for spray application
- no thinner should be used

**Induction time at 20 °C**

none

**Pot life at 20 °C**

1 hour\*

## AIRLESS SPRAY

- heavy duty single feed airless spray equipment preferably a 60 : 1 pump
- in-line heating or insulated hoses may be necessary to avoid cooling down of paint in hoses at low temperatures
- application with 45 : 1 airless spray is possible provided in-line heated high pressure hoses are used
- in case of using 45 : 1 airless spray the paint must be heated to approx 30 °C in order to obtain the right application viscosity
- length of hoses should be as short as possible

**Recommended thinner**

no thinner to be added

**Nozzle orifice**

approx. 0.53mm (0.021 inch)

**Nozzle pressure**

at 20 °C paint temperature – min. 280 bar (approx. 4000 p.s.i.)  
at 30 °C paint temperature – min. 220 bar (approx. 3000 p.s.i.)

## BRUSH AND ROLLER

- recommended only for spot repair and stripe coating
- due to thixotropic nature it is difficult to obtain a smooth film by brush, but this will not influence the performance

**Recommended thinner**

no thinner to be added

## CLEANING SOLVENT

90-53 (flashpoint 30 °C)

## SAFETY PRECAUTIONS



see safety sheets 1430, 1431 and MSDS 0678  
for information on LEL and TLV values

no solvent present; however, spray mist is not harmless and a fresh air mask should be used during spraying  
ventilation should be provided in confined spaces to maintain good visibility

Minimum ventilation air  
quantity required for 1 ltr of:

mixed paint

- a. to reach 10% of LEL 1 m<sup>3</sup>
- b. to reach TLV 22 m<sup>3</sup>

Sigma thinner 90-53

- a. to reach 10% of LEL 156 m<sup>3</sup>
- b. to reach TLV 3501 m<sup>3</sup>

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## ADDITIONAL DATA

### Film thickness and spreading rate

Dry film thickness in microns ( $\mu\text{m}$ )	300	400
Theoretical spreading rate ( $\text{m}^2/\text{l}$ )	3.3	2.5

Minimum dft for closed film with airless spray:

200  $\mu\text{m}$

Maximum dft for brush application:

100 – 150  $\mu\text{m}$

**Note: maximum dft is for overlap areas only**

#### - Measuring wet film thickness

- a deviation is often obtained between the measured apparent wft and the actual applied wft
- this is due to the thixotropic nature of the paint and the surface tension of the paint by which the release of air in the paint film takes some time
- recommendation is to apply a wft which is equal to the desired dft plus 60  $\mu\text{m}$

#### - measuring dry film thickness

- because of low initial hardness, the dft cannot be measured for some days due to the penetration of the measuring device into the soft paint film
- the dft should be measured using a calibration foil of known thickness placed between the coating and the measuring device

### Overcoating table with Sigmaguard CSF (spot repair and stripe coating)

Substrate temperature	5 °C	10 °C	20 °C	30 °C
Minimum interval	80 hours	36 hours	24 hours	16 hours
Maximum interval	20 days	20 days	20 days	14 days

Substrate should be dry and free from chalking and contamination

### Curing table

Substrate temperature	Dry to handle	Full cure
5 °C	60 hours	15 days
10 °C	30 hours	7 days
20 °C	16 hours	5 days
30 °C	10 hours	3 days

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

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Pot life  
(at application viscosity)

Paint temperature	Pot life
20 °C	1 hour
30 °C	45 minutes

## REFERENCES

explanation to product data sheets on information sheet 1411

DS 0678

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