

SIGMACOVER CSF

November 2006
Revision of November 2004

DESCRIPTION SigmaCover CSF is a solvent free amine-cured epoxy coating for maintenance and new construction.

PRINCIPAL CHARACTERISTICS

- One coat protection.
- Suitable for immersion in water.
- Good resistance to splash and spillage of chemicals.
- Good abrasion resistance.
- Covers sharp edges and corners.
- Can be applied by heavy duty single feed airless spray equipment (60:1)
- Eliminates explosion risk and fire hazard.
- Can be used over properly prepared concrete and masonry surfaces.
- Very low odor.
- No risk of solvent entrapment.

COLORS AND GLOSS Black – gloss

BASIC DATA AT 68° F (20°C)

Mass density	approximately 11.0 lbs/gal (1.3 kg/ltr)
Solids content	approximately 100%
VOC (by formula)	0.0 lbs/gal (0 g/ltr)
VOC (by EPA method 24)	1.1 lbs/gal (132 g/ltr)
Recommended dry film thickness	12 – 16 mils (300 – 400 µm)
Theoretical spreading rate	1604 ft ² /gal at 1 mil (39.3 m ² /ltr at 25 µm)
Touch dry after	4 hours
Overcoating interval	minimum 24 hours maximum 20 days.
Full cure after	5 days
Temperature resistance (dry)	250°F (121°C) continuous
Shelf life (cool and dry place)	minimum 12 months
Flash point (T.C.C.)	base: >200°F (>93°C) hardener: >230°F (>110°C)

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Packaging data 4.8 gallon mixed kit
 mix ratio: 3.8 : 1
 base: 3.8 gal in 6 gal can
 hardener: 1 gal in 1 gal can

**RECOMMENDED SUBSTRATE
 CONDITIONS AND
 TEMPERATURES**

- Steel; blast cleaned to SSPC-SP10/NACE No.2 (Near White Blast).
- Substrate temperature must be at least 5°F (3°C) above dew point.
- Decking: Power broomed using steel bristles to SSPC SP3.

INSTRUCTIONS FOR USE

ratio: base to hardener 85 : 15 by weight
 base to hardener 79.2 : 20.8 by volume

- When mixing, the temperature of base and hardener should be at least 68°F (20°C)
- At lower temperature the viscosity will be too high for spray application.
- No thinner should be used.

Induction time None

Pot life 1 hour at 68°F (20°C)

Relative humidity 95% maximum for general maintenance applications.

AIRLESS SPRAY

Recommended thinner No thinner may be added.

Heavy duty single feed airless spray equipment, preferable 60:1 pump ratio and suitable high pressure high pressure hoses should be used. In-line heating or insulated hoses may be necessary to avoid cooling down of paint in hoses at low air temperature. Application with 45:1 airless spray equipment is possible provided in-line heated high pressure hoses are used or if ambient and material temperatures are above 75°F (23°C).

Hose suggestions:

Hoses should normally be kept as short as possible.

Up to 50 ft. length, use hose with minimum 3/8" internal diameter.

For 50 – 100 ft. lengths use hoses with 1/2" minimum internal diameter.

A short 1/4" whip end section may be used for ease of application.

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Best results will be obtained using a 0.0019 – 0.0021 tip. Use approximately 4,000 psi (280 atm) at 68°F (20°C) and 3,000 psi (250 atm) at 86°F (30°C). All application equipment must be cleaned immediately after use. All paint inside the spraying equipment must be removed before the potlife time has been expired.

BRUSH/ROLLER For stripe coating only. Short nap roller recommended.
 Recommended thinner No thinner may be added.

Note: Other equipment may be suitable, contact the Sigma Technical Service Department for recommendations.

CLEANING SOLVENT 90-83 (Flash point 106°F (41°C)) or 90-53 (Flash point: 86°F (30°C))

SAFETY PRECAUTIONS

This product is offered for sale and use only to PROFESSIONALLY TRAINED INDUSTRIAL PERSONNEL. It is NOT FOR RESIDENTIAL USE. This product contains flammable solvents and/or other hazardous ingredients and must be used with caution. Observe all health and safety precautions as listed on the Material Safety Data Sheet during storage and handling, application, drying and disposal. DO NOT ATTEMPT TO USE THIS PRODUCT WITHOUT CONSULTING THE CURRENT “MATERIAL SAFETY DATA SHEET”. Material Safety Data Sheets are available from the Customer Service Department at SigmaKalon USA (713-355-3333)

A fresh air mask should be used during spraying. Spray mist is not harmless. Ventilation should be provided in confined spaces to maintain good visibility.

ADDITIONAL DATA

Film thickness and spreading rate	theoretical spreading rate ft ² gal (m ² /ltr)	134 (3.3 m ²)	100 (2.5 m ²)
	dft in mils (µm)	12 (300 µm)	16 (400 µm)

Maximum dft without sagging with airless spray 24 mils (600µm)
 Minimum dft for closed film with airless spray 8 mils (200µm)
 Maximum dft when brushing 4 mils (100µm)

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Although the coating is solvent free, some shrinkage of the film will be observed during the curing. This is due to several reasons including:

- Wet film thickness measurement is inaccurate due to thixotropy of the paint.
- The film shrinks slightly during polymerization of the components.
- Entrained small air bubbles in the wet film increase apparent wet film thickness, but escape before the film sets.
- Some of the reactive materials are slightly volatile and can evaporate at 68° - 86°F (20° - 30°C) before the film sets.

Overcoating table with SigmaCover CSF
(Spot repair and stripe coating)

Substrate Temperature	41°F (5°C)	50°F (10°C)	68°F (20°C)	86°F (30°C)
Minimum Interval	80 hours	36 hours	24 hours	16 hours
Maximum Interval (Free from chalking and contamination)	20 days	20 days	20 days	14 days

Curing table

Substrate temperature	Dry to handle, rainproof	full Cure
41°F (5°C)	60 hours	15 days
50°F (10°C)	30 hours	7 days
68°F (20°C)	16 hours	5 days
86°F (30°C)	10 hours	3 days

Adequate ventilation is required during application and during the curing period.

Pot life

68°F (20°C)	60 minutes
86°F (30°C)	45 minutes

Figures are valid for packages of 1 gallon (4 liters).

The potlife is 1 hour at 68°F (20°C) and will be reduced at higher temperatures. Due to the exothermic reaction, temperature during potlife can increase up to 140°F (60°C) at gel point.

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Worldwide availability While it is the aim of Sigma Coatings to supply the same product on a worldwide basis, slight local modifications can be necessary to comply with legislation or special circumstances. In such situations an alternative product data sheet is published.

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 and 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

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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.

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