

SIGMA FIREBARR 100 EXTERIOR

3 pages

January 2011
Revision of September 2005

DESCRIPTION	one component thin-film intumescent coating system for fire protection of structural steelwork
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none">– for steelwork which is subject to weathering, high humidity, marine environment etc. (exterior conditions)– meets international standards– provides fire protection from cellulosic fires from 30 minutes to 2 hours– tested according to well recognised standards such as BS, NF, DIN and certified by DIBt, CtiCM, WRFC and other authorities
COLOURS AND GLOSS	white - flat
BASIC DATA AT 20°C	(1 g/cm ³ = 8.25 lb/US gal; 1 m ² /l = 40.7 ft ² /US gal)
Mass density	1.28 g/cm ³
Volume solids	67 ± 2% *
VOC (supplied)	max. 305 g/kg (Directive 1999/13/EC, SED) max. 390 g/l (approx. 3.3 lb/gal)
Recommended dry film thickness	200 - 400 µm per coat note: depending on section factor and time of fire protection, more than one coat may be required *
Theoretical spreading rate	3.35 m ² /l for 200 µm, 1.68 m ² /l for 400 µm 2.60 m ² /kg for 200 µm, 1.30 m ² /kg for 400 µm
Touch dry after	8 hours at 400 µm
Overcoating interval	min. 24 hours with itself min. 48 hours with suitable topcoat * max. 12 months
Shelf life (cool and dry place)	at least 12 months
Flash point	above 26°C * see additional data
RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES	<ul style="list-style-type: none">– a compatibility test on the existing anticorrosive primer/coatings with the fire protection system is recommended *– any damage (impact, corrosion etc.) should be repaired prior to coating– substrate temperature should be at least 3°C above dew point– during application the relative humidity should be 30 - 80%– not to be applied under +5°C and above +50°C
INSTRUCTIONS FOR USE	<ul style="list-style-type: none">– stir thoroughly till homogeneous and free of lumps
AIRLESS SPRAY	
Recommended thinner	when needed up to 5% Thinner 21-06 may be used
Nozzle angle	20 - 50°, depending on shape of steel parts
Nozzle orifice	approx. 0.48 - 0.68 mm (= 0.019 - 0.027 in)
Nozzle pressure	15 - 20 MPa (= approx. 150 - 200 bar; 2130 - 2800 p.s.i.)

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BRUSH/ROLLER

Recommended thinner no thinner should be added
multicoats have to be applied in order to obtain the required dft

CLEANING SOLVENT

Thinner 21-06

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

Note

recommended film thickness and paint consumption in relation to the massivity and required fire protection based on BS 476 Part 21

Theoretical spreading rate

Example

Fire protection		30 min.	60 min.	90 min.	120 min.
Theoretical consumption	g/m ²	470	770	2750	3800
Theoretical consumption	l/m ²	0.37	0.60	2.17	3.00
Wet film thickness	µm	370	600	2165	2985
Dry film thickness	µm	250	400	1450	2000

- dry film thickness refers to intumescent coating only
- for the porous nature of the intumescent coating the consumption can not be calculated by using the figures for volume solids
- Approved primers see system sheet 3400

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
 Fire Protection Certificates see information sheet 1897
 Solvent borne intumescent coating systems see system sheet 3400

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