

**SIGMA FIREBARR 100 QUICK DRYING**

3 pages

January 2011  
Revision of September 2005

<b>DESCRIPTION</b>	one component thin-film intumescent coating for fire protection of structural steelwork
<b>PRINCIPAL CHARACTERISTICS</b>	<ul style="list-style-type: none"><li>– for steelwork which is subject to weathering, high humidity, marine environment etc. (exterior conditions)</li><li>– also available for interior conditions</li><li>– suitable for in shop application</li><li>– meets international standards</li><li>– provides fire protection from cellulosic fires from 30 minutes to 2 hours</li><li>– tested according to well recognised standards such as BS, NF and certified by CtiCM, WRFC and other authorities</li></ul>
<b>COLOURS AND GLOSS</b>	white - flat
<b>BASIC DATA AT 20°C</b>	(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)
Mass density	1.28 g/cm <sup>3</sup>
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 <sup>2</sup> /l for 200 µm, 1.68 m <sup>2</sup> /l for 400 µm 2.60 m <sup>2</sup> /kg for 200 µm, 1.3 m <sup>2</sup> /kg for 400 µm
Touch dry after	1 hour at 400 µm
Overcoating interval	min. 4 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
<b>RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES</b>	<ul style="list-style-type: none"><li>– a compatibility test on the existing anticorrosive primer/coatings with the fire protection system is recommended *</li><li>– any damage (impact, corrosion etc.) should be repaired prior to coating</li><li>– substrate temperature should be at least 3°C above dew point</li><li>– during application the relative humidity should be 30 - 80%</li><li>– not to be applied under +5°C and above +50°C</li></ul>
<b>INSTRUCTIONS FOR USE</b>	<ul style="list-style-type: none"><li>– the product must be mixed by slow speed mechanical agitator till homogenous</li><li>– all filters (incl. tip filter) and screens to be removed from spray equipment</li><li>– diameter of hoses to be 3/8 inch</li></ul>

**PASSIVE FIRE PROTECTION**

Fire Protection of Steel From Cellulosic Fires

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**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.)

**BRUSH/ROLLER**

Recommended thinner not suitable for this kind of application

**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	Fire protection		30 min.	60 min.	90 min.	120 min.
Example	Theoretical consumption	g/m <sup>2</sup>	470	770	2750	3800
	Theoretical consumption	l/m <sup>2</sup>	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

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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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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.

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