

PROTECTION OF STEEL FROM CELLULOSIC FIRES

STEELGUARD FM 550

3 pages

15 July 2009

DESCRIPTION

one component thin-film solvent borne intumescent coating for fire protection of structural steelwork

PRINCIPAL CHARACTERISTICS

- provides up to 120 minutes protection from cellulosic fires
- off-site or on-site application
- up to 1500 µm dft in a single coat
- suitable for C1 to C4 internal and external environments (ISO 12944); for dry internal (C1) environments no topcoat is required
- weather resistant up to 12 months without topcoat provided the coating has been applied in accordance with Information Sheet 1222 and is not subject to running or pooling water, hot high humidity or immersion
- tested to national and international standards such as BS 476, ENV 13381-4, UL 263 and certified with various national requirements

COLOURS AND GLOSS

white - matt

BASIC DATA AT 20°C

(1 g/cm³ = 8.25 lb/US gal; 1 m²/l = 40.7 ft²/US gal)
(data for mixed product)

Mass density

1.3 g/cm³

Volume solids

68 ± 3%

VOC (supplied)

max. 293 g/kg (Directive 1999/13/EC, SED)

max. 325 g/l (UK PG6/23(92) Appendix 3)

Recommended dry film thickness

normally 200 - 1500 µm applied in one coat

note: the required dry film thickness must be in accordance with the approval certification

Theoretical spreading rate

0.97 m²/l for 700 µm *

Touch dry after

30 minutes *

Overcoating interval

min. 6 hours with itself *

min. 48 hours with suitable topcoat *

max. unlimited *

Shelf life (cool and dry place)

at least 12 months

* see additional data

**RECOMMENDED
SUBSTRATE CONDITIONS
AND TEMPERATURES**

- approved primer, dry, sound and free from contamination
- substrate temperature should be at least 3°C above dew point during application and drying
- should not be applied under 5°C and above 50°C
- relative humidity during application must be lower than 85%

INSTRUCTIONS FOR USE

- stir thoroughly till homogeneous and free of lumps
- too much solvent results in reduced sag resistance

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AIRLESS SPRAY

Recommended thinner

Nozzle angle

Nozzle orifice

Nozzle pressure

when needed up to 5% Thinner 21-06 may be used

20 - 50°, depending on shape of steel parts

approx. 0.48 - 0.63 mm (= 0.019 - 0.025 in)

20 MPa (= approx. 200 bar; 2800 p.s.i.)

note: a 30 mesh / 500 µm internal filter is recommended

BRUSH

Recommended thinner

for small areas only (touch up and repair)

no thinner should be added

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**Film thickness and spreading rate**

theoretical spreading rate m ² /l	3.40	1.70	0.97	0.68	0.45
dft in µm	200	400	700	1000	1500

max. dft when brushing:

300 µm

Overcoating table for Steelguard FM 550 for dft up to 700 µm

with itself

substrate temperature	5°C	10°C	15°C	20°C	30°C
minimum interval	12 hours	10 hours	8 hours	6 hours	4 hours
maximum interval	unlimited	unlimited	unlimited	unlimited	unlimited

Overcoating table for Steelguard FM 550 for dft up to 1000 µm

with Steelguard 2458

substrate temperature	5°C	10°C	15°C	20°C	30°C
minimum interval	4 hours	2 hours	90 min.	60 min.	45 min.
maximum interval	unlimited	unlimited	unlimited	unlimited	unlimited

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Overcoating table for Steelguard FM 550 for dft up to 1000 µm

with other approved top coats

substrate temperature	5°C	10°C	15°C	20°C	30°C
minimum interval	120 hours	72 hours	60 hours	48 hours	36 hours
maximum interval	unlimited	unlimited	unlimited	unlimited	unlimited

Drying table for dft up to 700 µm

substrate temperature	touch dry
5°C	120 min.
10°C	90 min.
15°C	60 min.
20°C	30 min.
30°C	20 min.

drying times may vary considerable depending on ambient conditions, $A/V \text{ m}^{-1}$ (Hp/A) of section and applied film thickness

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The English text of this document shall prevail over any translation thereof.

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