

## PROTECTION OF STEEL FROM CELLULOSIC FIRES

### STEELGUARD 553

3 pages

15 July 2009

<b>DESCRIPTION</b>	one component thin-film solvent borne intumescent coating for fire protection of structural steelwork
<b>PRINCIPAL CHARACTERISTICS</b>	<ul style="list-style-type: none"> <li>- provides 90 minutes protection from cellulosic fires</li> <li>- off-site or on-site application</li> <li>- up to 1500 µm dft in a single coat</li> <li>- suitable for C1 to C4 internal and external environments (ISO 12944); for dry internal (C1) environments no topcoat is required</li> <li>- 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</li> <li>- tested to BS 476 and certified with the national requirements</li> </ul>
<b>COLOURS AND GLOSS</b>	white - matt
<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) (data for mixed product)
Mass density	1.35 g/cm <sup>3</sup>
Volume solids	75 ± 3%
VOC (supplied)	max. 257 g/kg (Directive 1999/13/EC, SED) max. 330 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	1.07 m <sup>2</sup> /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
<b>RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES</b>	<ul style="list-style-type: none"> <li>- approved primer, dry, sound and free from contamination</li> <li>- substrate temperature should be at least 3°C above dew point during application and drying</li> <li>- should not be applied under 5°C and above 50°C</li> <li>- relative humidity during application must be lower than 85%</li> </ul>
<b>INSTRUCTIONS FOR USE</b>	<ul style="list-style-type: none"> <li>- stir thoroughly till homogeneous and free of lumps</li> <li>- too much solvent results in reduced sag resistance</li> </ul>

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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 - 0.63 mm (= 0.019 - 0.025 in)  
 Nozzle pressure 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 <sup>2</sup> /l	3.75	1.88	1.07	0.75	0.50
dft in µm	200	400	700	1000	1500

max. dft when brushing: 300 µm

#### Overcoating table for Steelguard 553 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 553 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 553 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 m<sup>-1</sup> (Hp/A) of section and applied film thickness

### LIMITATION OF LIABILITY

The information in this data sheet is based upon laboratory tests we believe to be accurate and is intended for guidance only. All recommendations or suggestions relating to the use of the coating products made by PPG Protective & Marine Coatings, whether in technical documentation, or in response to a specific enquiry, or otherwise, are based on data which to the best of our knowledge are reliable. The products and information are designed for users having the requisite knowledge and industrial skills and it is the end-user's responsibility to determine the suitability of the product for its intended use.

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

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