

STEELGUARD® 951

DESCRIPTION

Two-component, 100% solids, epoxy intumescent passive fire protective coating for structural steelwork from cellulosic fires

PRINCIPAL CHARACTERISTICS

- Provides up to 180 minutes protection from cellulosic fires
- Highly durable, epoxy intumescent coating suitable for internal and external use
- Excellent corrosion protection suitable for X environments without topcoat as per EAD 350402-00-1106
- Excellent corrosion protection suitable for C5 environments without topcoat as per ISO12944
- Excellent corrosion protection suitable for C3 environments without primer & topcoat as per ISO12944
- Application using simple 2k spray equipment, larger heated plural spray equipment or single leg airless spray equipment
- High quality finish
- No reinforcing mesh required
- Up to 3500 microns (138mils) target DFT in a single coat
- Rapid cure and fast overcoating
- Low VOC / LEED credit contributor
- Independently tested and approved in accordance to recognized national and international fire & corrosion standards including: EN13381-8; BS476; ISO12944; GB14907
- CE marked product, ETA 22/0790

COLOR AND GLOSS LEVEL

- Light gray
- Matt
- Suitable for use with a wide range of topcoats in a range of colors and gloss levels

BASIC DATA

Data for mixed product	
Number of components	Two
Mass density	1.27 kg/l (10.60 lb/US gal)
Volume solids	100%
VOC (Supplied)	EUR Directive: 2004/42/IIA(i)(500) 0 g/l EPA Method 24: 41.0 g/ltr (0.3 lb/USgal)
Recommended dry film thickness	300 - 3500 µm (12.0 - 140.0 mils) per coat
Shelf life	Base: at least 12 months when stored cool and dry Hardener: at least 12 months when stored cool and dry

Notes:

- Material should be stored in dry conditions, out of direct sunlight and at temperatures above 0°C (32°F) and below 30°C (85°F)
- The applied density is dependent upon many variables such as temperature, test method, application method and equipment
- Required dry film thickness must be in accordance with requirements of fire approval certification
- Apply appropriate loss/wastage factor



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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Approved primer must be sound, dry and free from any contamination and surface prepared in accordance with STEELGUARD 951 APPLICATION GUIDELINES
- Suitable for galvanized steel prepared in accordance with STEELGUARD 951 APPLICATION GUIDELINES

Substrate temperature and application conditions

- Ambient temperature below 10°C (50°F) is acceptable; however curing to hardness takes longer, and it will cease curing below 5°C (41°F)
- Substrate temperature during application and curing should be between 5°C (41°F) and 40°C (104°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Relative humidity during application and curing should not exceed 85%

INSTRUCTIONS FOR USE

- Application should be strictly in accordance with STEELGUARD 951 APPLICATION GUIDELINES
- Individual components must be stored for 24 hours minimum at 20-25°C (68-77°F) prior to use
- Stir individual components thoroughly until homogeneous and free of lumps

Mixing ratio

- By volume: base to hardener 3.0:1 (75.0:25.0)
- By weight: base to hardener 3.56:1 (78.07:21.93)

Notes:

- Tolerance +/- 5%.
- When applying by single feed spray pump or trowel application, it is recommended that full kits are mixed.

Pot life

35 minutes at 20°C (68°F)

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Airless Spray – Plural Component (Preferred)

Recommended thinner

No thinner should be added

Nozzle angle

40° for large flat surfaces

Nozzle orifice

Approx. 0.53 – 0.64 mm (0.021 – 0.025 in)

Nozzle pressure

23.0 MPa (approx. 230 bar; 3336 p.s.i.)

Notes:

- See STEELGUARD 951 APPLICATION GUIDELINES for full details
- Individual components must be stored for 24 hours minimum at 20-25°C (68-77°F) prior to use
- Suitable insulated and/or heated hoses may be required depending on ambient environmental conditions
- Simplified plural machines with hoppers, or heated plural spray machines with pressurized tanks may be used.

Airless Spray – Single Feed Pump

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 7%

Nozzle angle

40° for large flat surfaces

Nozzle orifice

Approx. 0.53 – 0.64 mm (0.021 – 0.025 in)

Nozzle pressure

35.0 MPa (approx. 350 bar; 5077 p.s.i.)

Notes:

- Material (mixed) temperature needs to be minimum 20°C (68°F) and no more than 45°C (80°F)
- The maximum length of the hoses should not exceed 15 m (49.2 ft)
- use of spray equipment with a ratio of 70:1 is recommended
- See STEELGUARD 951 APPLICATION GUIDELINES for full details
- Maximum WFT of 2000 microns (79 mils) achievable with material thinned by 7% by volume THINNER 91-92 at 23°C (74°F)

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Trowel

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 1%

Notes:

- Recommend that only full kits are mixed and applied (avoid part kits to ensure correct mixing ratio)
- Recommend for small areas and touch-up only
- See STEELGUARD 951 APPLICATION GUIDELINES for full details

Cleaning solvent

THINNER 91-92

ADDITIONAL DATA

Overcoating interval for STEELGUARD 951						
Overcoating interval for up to a maximum DFT of 3500um (138mils) per coat. Unthinned.						
Overcoating with...	Interval	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	17 hours	11.5 hours	5.5 hours	2.5 hours	1 hour
	Maximum	3 months	3 months	2 months	2 months	1 month
approved topcoats	Minimum	27 hours	17 hours	8 hours	3 hours	2 hours
	Maximum	3 months	3 months	2 months	2 months	1 month

Note: For product that is thinned, please refer to the STEELGUARD 951 Application Guide

Curing time for solvent-free application			
Substrate temperature	Dry to touch	Dry to handle	Full cure
5°C (41°F)	17 hours	27 hours	6 days
10°C (50°F)	11 hours	17 hours	4.5 days
15°C (59°F)	8 hours	11 hours	3.5 days
20°C (68°F)	5 hours	7 hours	60 hours
25°C (77°F)	3.5 hours	4.5 hours	48 hours
30°C (86°F)	2.5 hours	3 hours	36 hours
40°C (104°F)	1 hour	2 hours	24 hours

Notes:

- Adequate ventilation must be maintained during application and curing
- Curing times may vary depending on substrate, ambient and material temperature
- Curing time and overcoating times are using unthinned material. Thinned material will be extended.
- For product that is thinned, please refer to the STEELGUARD 951 Application Guide



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SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEET 1411 and relevant Material Safety Data Sheets
- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, as well as contact between the wet paint and exposed skin or eyes

REFERENCES

• STEELGUARD 951 APPLICATION GUIDELINE	INFORMATION SHEET	1223
• STEELGUARD QUALIFIED PRIMERS	INFORMATION SHEET	1224
• STEELGUARD QUALIFIED TOPCOATS	INFORMATION SHEET	1226
• STEELGUARD SYSTEMS AND ENVIRONMENTS	INFORMATION SHEET	1228
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411

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