

PPG STEELGUARD® 951

DESCRIPTION

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

PRINCIPAL CHARACTERISTICS

- Provides up to 240 minutes protection from cellulosic fires
- Highly durable, chemically resistant 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 ISO 12944
- Excellent corrosion protection suitable for C3 environments without primer & topcoat as per ISO 12944
- Application using hopper-fed plural PFP spray equipment, larger heated plural PFP spray equipment or modified single leg airless spray equipment
- Direct-to-Metal application over properly prepared, lightly gingered steel where the end use is classified as interior conditioned or general-purpose space
- High quality finish
- No reinforcing mesh required
- Up to 3500 µm (138.0 mils) 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, ASTM E119, UL 263, CAN/ULC-S101, UL-2431-IA Classification
- 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 AT

Data for mixed product	
Number of components	Two
Mass density	1.0 kg/m ² (8.35 lb/US gal) Applied density per unit area and thickness 0.001m (IMO MSC 307(88) Marine FTP code 2010)
Volume solids	100%
VOC (Supplied)	EUR Directive: 2004/42/IIA(i)(500) 0 g/l EPA Method 24: 41.0 g/l (0.3 lb/US gal)
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:



PPG STEELGUARD® 951

- 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

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

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

Substrate temperature and application conditions

- The following conditions are considered the extremes at which PPG STEELGUARD 951 can be applied and cured (all values applicable during application and curing):
- Substrate temperature: Minimum 5°C (41°F) and at least 3°C (5°F) above dew point and not above 60°C (140°F)
- Relative humidity: Maximum 70%
- Environment temperature: Above 10°C (50°F) and not above 45°C (120°F)

Note:

- The PPG STEELGUARD 951 APPLICATION GUIDELINES should be consulted for the optimum and preferred environmental conditions. Environmental conditions must be monitored throughout the working shift as well as during curing times since weather conditions can vary greatly. Where the optimum environmental conditions cannot be met or maintained or the environmental conditions are expected to deviate from the extremes as set forth above, advice should be sought from PPG.

INSTRUCTIONS FOR USE

- Application should be strictly in accordance with PPG 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

PPG STEELGUARD® 951

Pot life

35 minutes at 20°C (68°F)

Airless spray – Plural component**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 PPG STEELGUARD 951 APPLICATION GUIDELINES for full details
 - 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
-

PPG STEELGUARD® 951

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:

- See PPG STEELGUARD 951 APPLICATION GUIDELINES for full details
- 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
- Maximum WFT of 2000 µm (79.0 mils) achievable with material thinned by 7% by volume THINNER 91-92 at 23°C (74°F)

Trowel

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 1%

Notes:

- See PPG STEELGUARD 951 APPLICATION GUIDELINES for full details
- 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

Cleaning solvent

- THINNER 91-92
-

PPG STEELGUARD® 951

ADDITIONAL DATA

Overcoating interval for up to a maximum DFT of 3500 µm (138.0 mils) 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 hours
	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

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.

SAFETY PRECAUTIONS

- 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
- Read all label and Safety Data Sheet (SDS) information prior to use

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/ circumstances. Under these circumstances an alternative product data sheet is used.

PPG STEELGUARD® 951

REFERENCES

- System sheet | PPG STEELGUARD | Approved primers
- System sheet | PPG STEELGUARD | Approved topcoats
- Information sheet | Explanation of product data sheets
- Guide | PPG STEELGUARD 951 | Application guidelines
- System sheet | PPG STEELGUARD | Systems and environments
- Guide | PPG STEELGUARD 951 | Mass density guidelines
- Guide | PPG STEELGUARD 951 | Secondary Attachments
- Information sheet | PPG Steelguard | FAQ's

WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.