AMERCOAT®

Protective Coatings

Steelguard 560

Thin Film Intumescent Coating

Product Data/ Application Instructions

- **Fast drying solvent based thin film intumescent**
- **Rapid drying providing reduced times to handling**
- **Tested to international fire test standards**
- **Up to 2 hours fire protection of structural steel**
- **Off-site or on-site application**
- **Up to 1.0 mm dry film thickness application in a single coat**
- **For use in C1, C2, C3 & C4 internal & external environments - no sealer coat required for dry internal C1 service conditions (ISO 12944)**

Typical Uses

Intumescent fire protection for internal and external structural steel. Fast drying version of Steelguard 550 intended for off-site application using manual airless spray equipment. Allows for rapid job completion, early resistance to mechanical damage and faster throughput of coated steelwork. Also suitable for on-site application.

Approvals

Steelguard 560 has been tested to National and International standards for cellulosic fire exposure (ISO 834) and subsequently assessed and certified in accordance with various National requirements. Please contact your PPG Protective and Marine Coatings representative for latest information relating to local market requirements and approvals. For given projects PPG Protective and Marine Coatings can provide customers with loading data and material consumption calculations stipulated by required fire protection, steel section designation and local requirements. Standard loading tables can be made available where applicable.

Mixing

Stir thoroughly before use until the product is uniform throughout. This may cause an apparent thinning effect which is normal for this product. A power mixer should be used.

warrington certifire certification

APPROVED PRODUCT
CF 457

Physical Data

Appearance when dry	matt
Colour	white, grey
Components	1
Volume solids *	68 ± 3%
VOC**	
EC SED 1999/13/EC	294g/kg (377 g/l)
UK PG6/23 (92) Appendix 3	325 g/l (2.7 lbs/gal)
Curing mechanism	solvent release
Loading requirements	In order to establish the dry film thickness required to give the specified fire resistance reference should be made to the products A/V m^{-1} (Hp/A) or limiting temperature tables. Contact your PPG representative for full details.

Dry film thickness (µm)	250	400	500	700	1000
Wet film thickness (µm)	370	590	740	1030	1470
Theoretical coverage (m^2/l)	2.72	1.70	1.36	0.97	0.68

(wet film thicknesses quoted are theoretical for one airless spray coat)

Specific gravity	1.3 kg/l	
Flashpoint		
(closed cup)	°C	°F
Steelguard 560	4	39
Amercoat 12	24	75

*Volume Solids is measured in accordance with ASTM D2697 modified. Slight variations of up to ±3% may occur due to testing variances.

** VOC figures are quoted according to the EC directive 1999/13/EC which are theoretically calculated figures and the UK PG6/23 (92) Appendix 3 which are practically determined figures

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Surface Preparation
Applied over a blasted and suitably primed steel substrate. The surface must be dry and free of dust, salts, grease and other contaminants immediately before coating. The primer used should be applied in accordance with the specific technical data sheet instructions, and must be approved by PPG to ensure compatibility with the Steelguard 560. The total dry film thickness of primer coats should generally not exceed 150 µm. For epoxy primers the maximum allowable dry film thickness may be extended, consult your PPG representative prior to intumescent application.
For off-site application Steelguard 560 may be applied directly to the blast cleaned substrate provided the steelwork is to be used in dry internal C1 conditions and the dry film thickness exceeds 400 µm. The steel should be abrasive blast cleaned to ISO 8501-1 Sa 2½ with a blast profile of approximately 50-75 µm and should not exceed 100 µm. Coating should occur before degradation of the surface takes place. If oxidation occurs then the steel should be re-prepared. The surface must be dry and free of dust, salts, grease and other contaminants immediately before coating.

Application Methods
AIRLESS SPRAY - Use a pump capable of producing a minimum pressure at the tip of 2800 psi (200 kg/cm²). A 30 mesh/500 µm internal filter is recommended. Tip size 19-25 thou' (0.48-0.63mm). For off-site application it is recommended that the product is applied in 700 µm dry film thickness coats allowing a minimum of 6 hours drying at 15°C/59°F between each coat.
BRUSH – Suitable only for small areas such as repairs. Apply evenly using a clean, well-loaded brush at up to 300 µm dry film thickness per coat. As a guide allow at least 2 hours drying at 20°C/68°F between coats.

Drying Characteristics
Drying times will vary considerably depending on ambient conditions, A/V m^{-1} (Hp/A) of section being coated and applied film thickness. As a guide, at 15°C/59°F a 700 µm dry film thickness coating will be touch dry in 30 minutes and hard dry after approximately 20 hours. For further details on the drying times of Steelguard 560 refer to the product drying tables or contact your PPG representative.

Overcoating
The standard recommended topcoat for Steelguard 560 is Steelguard 2458 which allows for fast overcoating and job completion. Other approved topcoats but with longer overcoating periods include Amercoat 450S and PSX 700#. No sealer is required for internal C1 service conditions unless for cosmetic reasons. For internal C2 service conditions Steelguard 560 must be adequately sealed with Steelguard 2458 at 60 µm dry film thickness or other approved topcoat. For C3 & C4 external service conditions Steelguard 560 must be adequately sealed with two coats Steelguard 2458 at 120 µm total dry film thickness or other approved topcoat. Please contact your PPG representative for specific recommendations. It is important that the specified intumescent thickness has been achieved before any topcoating.
(# Amercoat 71TC required as a tie coat)

Application Data

Substrate	primed abrasive blasted steel	
Application methods	airless spray, brush (for small areas only)	
Environmental Conditions		
Relative humidity:	up to 85%	
Surface temperature:	5 - 40°C	41 - 104°F
Air temperature	5 - 40°C	41 - 104°F

Surface temperature must be at least 3°C/5°F above the dew point to prevent moisture condensation on the surface.

Potlife ..... not applicable

Thinner ..... not normally necessary
Amercoat 65 can be used when needed (up to 5% by volume), However wet/ dry film measurement result will differ & lower max film build as result will have to be considered

Cleaner ..... Amercoat 12

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Providing the steel is suitably primed and the dry film thickness of the intumescent coating exceeds 250 µm, Steelguard 560 can be left externally without a topcoat for up to 12 months. During this period, however, Steelguard 560 must be protected from pooling and running water, hot humid environments and immersed conditions.
Steelguard 560 must have sufficient drying time before exposure in external conditions. As a guide, at 15°C/59°F, for a dry film thickness of 700 µm, a minimum drying period of 20 hours is recommended from time of application of the final coat before exposure.

Refer to product drying tables for drying and overcoating schedules.

Application Procedure:

1. Flush equipment with recommended cleaner before use.
2. Stir to an even consistency with a power mixer.
3. Thinning is normally not required for airless spray.
4. For airless spray apply a wet even coat in parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays.
5. Give special attention to welds, rough spots, sharp edges and corners, rivets, bolts, etc.
6. Application at 590 µm wet film thickness will normally provide 400 µm dry film.
7. Check thickness of dry coating with a non- destructive dry film thickness gauge, such as Mikrotest or Elcometer. If less than specified thickness, apply additional material as needed.
8. Small damaged or bare areas and random pinholes or holidays can be touched up by brush. Repair larger areas either by spray or brush with Steelguard 560 or by trowel, knife, spatula using Steelguard 2450 repair filler.
9. For repair of damaged primerless systems where bare steel is exposed, a suitable primer should be applied prior to re-application of the intumescent coating.
10. In confined areas ventilate with clean air during application and drying until all solvents are removed. Temperature and humidity of ventilating air must be such that moisture condensation will not form on surface.
11. Clean all equipment with recommended cleaner immediately after use or at least at the end of each working day or shift.

Before using the product, read the label on the can and consult the material safety data sheet.

Shipping Data

Pack size	20 and 200 litres
Shipping weight	approx. 29 kg (20 l.)
Shelf life	1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F).

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Safety
Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods.

Warranty
PPG warrants its products to be free from defects in material and workmanship. PPG's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at PPG's option, to either replacement of products not conforming this warranty or credit to Buyer's account in the invoiced amount of the non-conforming products. 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, or one year from the delivery date, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

PPG makes no other warranties concerning the product. No other warranties, whether express, implied or statutory, such as warranties of merchantability or fitness particular purpose, shall apply. In no event shall PPG be liable for consequential or incidental damages.

Any recommendations or suggestion relating to the use of the products made by PPG, whether in its technical literature, or response to specific enquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyer's having requisite skill and know-how in the industry, and therefore it is Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

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Due to PPG's policy of continuous product improvement, the information contained in this Product Data/Application Instructions sheet is subject to change without notice. It is the Buyer's responsibility to check that this issue is current prior to using the product. For the most up-to-date Product Data/Application Instructions always refer to the PPG Protective & Marine Coatings website at www.ppgpmc.com

To avoid any confusion that may arise through translation into other languages, the English version of the Product Data/Application Instructions will be the governing literature and must be referred to in case of deviations with product literature in other languages.

Condition of Sale
All our transactions are subject to our Terms and Conditions of Sale.