



New Guard Coatings Group

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This information is not exhaustive and it is the user's responsibility to ensure that this data sheet is the most current by contacting their local New Guard Coatings Group branch prior to using the coating/product.

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Steelguard FM 549

Thin Film Intumescent Coating
(formerly Steelguard 2549 FMS)

Product Data / Application Instructions

- Tested to BS476 Part 21
- Up to 2 hours fire protection
- Works or site application
- Up to 1.5 mm dft per coat
- Rapid job completion
- No sealer coat required for dry internal C1 conditions
- EPA compliant (1998)

Typical Uses

Intumescent fire protection for internal and external structural steel. Steelguard FM 549 is suitable for on or off site application.

Surface Preparation

Applied over a suitably primed surface.
The primer used should be approved by Ameron to ensure compatibility with the Steelguard FM 549.
The surface must be dry and free of dust, salts, grease and other contraminants immediately before coating.

Mixing

Stir thoroughly before use until the product is uniform throughout.

Application Methods

AIRLESS SPRAY - Use a pump of minimum ratio 45:1 (Graco "King" or equivalent) capable of producing a minimum pressure at the tip of 2800 psi (200 kg/cm²). Tip size 19-25 thou' (0.48-0.63mm). A 30 mesh/ 500 µm internal filter is recommended. Dry film thickness of initial coat should not exceed 1.5 mm. Subsequent coats may be applied after 8 hours to a maximum dry film thickness of 1.0 mm per coat.
BRUSH - Apply evenly using a clean, well-loaded brush at up to 300 microns dft per coat. Allow 2-16 hours drying between coats, dependent on site conditions.

Physical Data

Appearance when dry	matt
Colour	white
Substrate	primed steel
Components	1
Volume solids	68 ± 3%
VOC	325 g/l
Curing mechanism.....	solvent release

Loading requirements: In order to establish the dft required to give the specified fire resistance, it is necessary to first calculate the Hp/A values. The dft can then be determined from the Hp/A tables.

Dry film thickness (µm)	250 400 500 700 1000
Wet film thickness (µm)	370 590 740 1030 1470 (wet film thicknesses quoted are theoretical for one airless spray coat)
Theoretical coverage	0.97 m ² /l at 700 µm
Application methods	airless spray, brush
Pot life (at 20°C):	not applicable
Specific gravity.....	1.3 kg/l.
Thinner	normally not necessary
Cleaner	Amercoat 65
Flashpoint (closed cup)	
Steelguard FM 549	25°C
Amercoat 65	24°C
Pack size	20 litres
Shipping weight	approx. 28 kg
Shelf life	1 year when stored indoors in unopened, original containers at 5 to 35°C.

Environmental Conditions

Relative humidity: up to 85%
Surface temperature: minimum: 5°C
maximum: 40°C

The surface temperature must also be at least 3°C above dew point.

Drying Characteristics

Drying times will vary considerably depending on ambient conditions, method of application, Hp/A of section being coated and applied film thickness.

As a guide, at 20°C a 400 µm dry film thickness coating will be touch dry in approximately 2 hours and hard dry after approximately 48 hours.

Overcoating

For dry INTERNAL situations there is no requirement finish coat.

Where a coloured finish is required Steelguard FM 549 should be allowed to dry for a minimum of 2 hours prior to spray application of Steelguard 2458 at a recommended dft of 50 µm, for C1 environments.

For EXTERNAL applications or areas other than dry internal C1 conditions, Steelguard FM 549 must be sealed with Steelguard 2458 consult your Ameron representative for dft requirements.

Steelguard FM 549 intumescent coating systems must be protected from hot humid conditions and pooling water at all times.

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.
4. Stir during application to maintain uniformity of material. 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 370 µm wet film thickness will normally provide 250 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

Safety

Since improper use and handling can be hazardous to health and cause fire or explosion, safety precautions included with application instructions must be observed during all storage, handling, use and drying periods. 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.

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron's option, to either replacement of products not conforming to 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 Ameron 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 Ameron of such nonconformance as required herein shall bar Buyer from recovery under this warranty.

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

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Limitation of Liability

Ameron's liability on any claim of any kind, including claims based upon Ameron's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. In no event shall Ameron be liable for consequential or incidental damages.

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holidays can be touched up by brush. Repair larger areas by either by spray or brush using Steelgurd FM 549 or by trowel, knife, spatula using Steelguard 2450.

9. 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.
10. 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.