AMERCOAT®

Steelguard FM® 550

Thin film intumescent coating

Product Data/ Application Instructions

- Thin film solvent based intumescent
- Tested to international fire test standards
- EPA compliant
- Shop or site application
- Up to 40 mils dft application in a single coat
- Rapid job completion
- Faster recoat times then conventional thin film intumescents
- Listed by Underwriter's Laboratories, Inc. as a fire system for protection of standard steel for up to 2 hours
- Listed by U.L. for general purpose interior or interior conditioned space application
- Top coated with Amercoat 450H for a durable, decorative finish
- Cost effective alternative to conventional fireproofing materials

Typical Uses

Intumescent fire protection for internal structural steel. Steelguard FM 550 is suitable for off site application by manual airless spray or automatic application with pre-heat and accelerated drying facilities.

Physical Data

Finish	Flat	
Color	White, gray	
Components	1	
Curing mechanism	Solvent release	
Volume solids (ASTM D2697 modified)	68 ± 3%	
Total dry film thickness	refer to specific design criteria based on the w/d ratio of the steel members	
Dry film thickness per coat	Up to 40 mils dft	
Coats	1-4 depending on target fire rating	
Thinner/Cleaner	Amercoat 65	
Theoretical coverage	ft^2/gal	m^2/L
1 mil dft	1090	27.2
10 mils dft	109	2.72
40 mils dft	27	0.7
VOC	3.08 lb/gal	376g/L
Flash point (SETA)	°F	°C
Steelguard FM 550	77	25

Qualifications

Please refer to the following U.L./ANSI 263 designs: (www.ul.com)

N620 restrained and unrestrained beams

X665 w-shape columns

X666 tubular columns

X667 steel pipe columns

Steelguard FM 550 has also been tested to British Standard 476 Part 21. Appraised by the UK ASFP technical committee and approved for entry in the Yellow Book. Steelguard FM550 has also been tested and approved to several national fire test standards. Please contact your PPG representative for details.

ASTM E84 Results

Flame Spread	15
Smoke Developed	40-45
NFPA	Class A

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 FM 550. The total dry film thickness of primer coats should not exceed 6 mils. The steel should be abrasive blast cleaned to SSPC SP-10/ NACE 2 with a blast profile of approximately 2-3 mils and should not exceed 4 mils. 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.

Mixing
Stir thoroughly before use until the product is uniform throughout. A power mixer should be used.

Application Equipment

Application Methods
Spray application with provide the smoothest finish. Brush application will result in a textured finish.

Airless Spray - Use a pump capable of producing a minimum pressure at the tip of 2800 psi (200 kg/cm^2). A 30 mesh/500 micron internal filter is recommended. Tip size 0.017-0.023. Dry film thickness of initial coat should not exceed 60 mils. Subsequent coats may be applied after 8 hours at 70˚C to a maximum dft of 40 mils per coat.

Brush - Apply evenly using a clean, well-loaded brush at up to 12 mils dft per coat. Allow at least 2 hours drying at 70˚F between coats.

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 12 mils wet film thickness will normally provide 6-7 mils 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 FM 550.
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 Amercoat 12 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.

Application Data

Applied over substrates	Primed steel
Primer/s	Amercoat 5105 (1 hour rating only) Amercoat 3207, Amercoat 385, Amercoat 370, Amerlock 2/400
Method	Airless spray, brush
Pot life (hours)	N/A
Environmental conditions	
Temperature	°F 40-105˚F / °C 5-40˚C
Relative humidity	85% maximum Care should be taken that guarantee temperatures are at least 5˚F above the dew point

Minimum Recoat Time (hours)

	°F/°C		
	90/32	70/21	50/10
(up to 28 mil coats)	4	6	10

Minimum Topcoat Time with Amercoat 450H* (days)

	°F/°C		
	90/32	70/21	50/10
up to 40 mils	1.5	2	3
40 - 60 mils	2	3	9
60 - 80 mils	4	5	12
above 80 mils	>5days	>7days	>21days

Topcoat or recoat time (days) (maximum)	Unlimited, surface must be clean, dry, and free of any contaminants

Time before service @ 100 mils (hours)

	°F/°C			
	90/32	70/21	50/10	32/0
(hours)	12	24	48	96

** Current U.L. ratings require a 2-3mil topcoat with Amercoat 450H for all applications.*

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

CAUTION – Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep spray mists and vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. PPG makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which PPG is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for industrial use only. Not for residential use .

Shipping Data

Packaging

	5-gal units	
Shipping weight (approx.)	lb	kg
5-gal unit	58	26

Shelf life when stored indoors at 40 to 100°F (4 to 38°C)

1 year from shipment date

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities. See application instructions for complete information and safety precautions.

The mixed product is photochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.

PPG Protective & Marine Coatings
www.ppgpmc.com/northamerica
One PPG Place, Pittsburgh, PA 15272 • Tel: 888-9PPGPMC