SELECTION & SPECIFICATION DATA

Generic Type	A single package, water based intumescent coating designed for the fire protection of interior structural steel.
Description	A/D Firefilm® III C is a decorative, fiber free, thin film intumescent coating designed for the fire protection of steelwork for up to a 3 hour fire rating, depending on the design. The recommended use for this product is fireproofing of interior steel beams, columns, tubes, and pipes in clean room and sterile environments.
Features	• UL/ULC, ITS and FM Listed – designs for many types of steel sections. Up to 3 hour fire ratings for both interior general purpose and interior conditioned space applications. • Decorative Finish - Gives a smooth, decorative finish. Compatible topcoats available in a wide range of colors. • Advanced fibre free formulation - dust free surface. • Durable finish – Provides a hard, impact and abrasion resistant surface • Topcoat finishes smooth to slight orange peel. • Thin-film coating – space saving smaller column footprints. • Low VOC content • LEED Compliant • Very low out-gassing.
Color	White
Finish	Smooth
Primers	A/D Firefilm® III C must be applied over a compatible primer. If the steel has already been coated with an existing primer, refer to A/D Technical Service for advice before applying A/D Firefilm® III C. Contact A/D Technical Service for a complete list of approved primers for clean room applications.
Fireproofing Topcoats	For interior conditioned space, topcoats are optional. For interior general purpose, A/D Fire approved topcoats are required. A/D Firefilm® III C must be applied to the specified DFT and be dry before applying a topcoat. Contact A/D Technical Service for a complete list of approved topcoats for clean room applications.
Wet Film Thickness	1.14 mm (45 mils) per coat *During the drying process, the coating will shrink due to the evaporation of water. In order to calculate the wet film thickness required, the following formula can be used: WFT=(DFT/Volume Solids)x100
Dry Film Thickness	0.8mm (30 mils) per coat *A/D Firefilm® III C must be applied to the specified DFT and be dry before applying a topcoat. The dry film thickness shall be checked using an electronic or magnetic thickness gauge.
Solids Content	By Volume 65%
VOC Values	As Supplied 20g/L (0.17 lb./gal)
Limitations	Not for use in exterior environments or for interior steelwork that will be exposed to freeze/thaw cycling or long-term surface temperatures over 60°C (140°F) in normal use.

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be primed with compatible primer and be clean, dry and free of oil, grease, loose mill scale, dirt, dust or other materials which would impair the bond of A/D Firefilm® III C to the substrate.

PERFORMANCE DATA

Test Method	Results
ASTM D2240 Hardness	Shore D 65-70 (fully cured) Shore D 60 (Topcoated)
ASTM D2794 Impact	1.75kg/m (152 in-lb.)
ASTM D4060 Abrasion	103 mg loss@1000 cycles
ASTM D4541 Bond Strength	575 psi (3.9 MPa)
ASTM E-761 Compressive Strength	757 psi (5.2 MPa)
ASTM E-84 Surface Burning	Class A
Density	89 pcf (1,425 kg/m³)

All values derived under controlled laboratory conditions.
Test reports and additional data available upon written request.

MIXING & THINNING

Mixer | Use 12.7mm (1/2") electric or air driven drill with a slotted paddle mixer (300 rpm under load).

Mixing | A/D Firefilm® III C must be mixed using a 12.7mm (1/2") electric or air driven drill with a slotted pad or Jiffy mixer blade. Mix material for a minimum of 5 minutes to achieve the necessary texture required before spraying.

Thinning | Do not thin.

APPLICATION EQUIPMENT

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General Guidelines:

Airless Spray | Use 3.7 L (1.0 gal.) per minute electric airless (minimum) to provide an operating pressure of 3,000 psi (204 bar). Must have 30-mesh inline filter installed. Remove rock catcher from siphon tube.

Spray Gun | Silver Gun with gun swivel. Contractor gun (with filter remover) or equivalent.

Spray Tips | 0.017”-0.021” Use Graco heavy duty RAC non diffuser tips and housing).

Fan Size | 101 mm - 254 mm (4”-10”) (depending on section being sprayed)

Hose Length | 45m (150’)

Material Hose | 9.25mm (3/8”) I.D minimum

Whip Hose | 6.35mm (¼”) I.D. minimum (optional)

APPLICATION PROCEDURES

General | May be applied by spray, trowel, brush or roller. Spray application is recommended for the optimum production, coverage and finish. When applying by trowel, brush or roller, work from a small container and mix material frequently. The original pail should be kept tightly closed.

Airless Spray | A single coat, built up with a number of quick passes, allows greater control over quantities, thickness and finish. In most conditions, it is advantageous to apply two thin coats rather than one thick coat.

Application Rates | At an ambient temperature of 21°C (70°F), the following application rates are applicable:
Spray / Trowel: 1.14mm (45 mils) per coat (wet)
Brush / Roll: 0.25mm (10 mils) per coat (wet)

	24 hour recoat time between coats *A/D FIREFILM® III can be recoated when pervious coat has a Shore D hardness of 50measured at 21°C (70°F),
Wet Film Thickness	Frequent thickness measurements with a wet film gauge are recommended during the application process to ensure uniform thickness
Dry Film Thickness	Final thickness must be measured using an electronic dry film thickness gauge. For method of thickness determination and tolerances refer to: AWCI Technical Manual 12-B (Standard Practice for the Testing and Inspection of Field Applied Thin Film Intumescent Fire Resistive Materials).

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	21°C (70°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	38°C (100°F)	52°C (125°F)	43°C (110°F)	85%

*Steel surface temperature should be a minimum 3°C (5°F) above the dew point. A/D FIREFILM® III C is sensitive to water and must be protected from exposure to weathering and moisture. Protect from freezing.

CURING SCHEDULE

Surface Temp. & 50% Relative Humidity	Dry to Recoat
25°C (77°F)	24 hours

*For optimum curing, it is recommended to apply one coat at 1.14mm (45 mils) wet per day. Drying time will vary with temperature and humidity conditions. Air moment and thinner coats will assist drying. The next coat of A/D FIREFILM® III C can be applied when the pervious coat has a minimum Shore D hardness of 50 measured at 21°C (70°F). Material is ready to be Topcoated when an average Shore D hardness of 60 is achieved. Consult A/D Technical Service for specific details. Higher film thickness will require longer drying time for topcoating.

CLEANUP & SAFETY

Cleanup	Pump, Gun, Tips and Hoses and mixer should be cleaned at least once per day with water.
Safety	Follow all safety precautions on the A/D Firefilm® III C Material Safety Data Sheet. It is recommended that personal protective equipment be worn, including spray suits, gloves, eye protection and respirators when applying A/D Firefilm® III C.
Overspray	All adjacent and finished surfaces shall be protected from damage and overspray.
Ventilation	In enclosed areas, ventilation shall not be less than 4 complete air exchanges per hour until the material is dry.

MAINTENANCE

General	If coating becomes damaged, rebuild required thickness by spray or trowel. When dry, smooth and finish with approved topcoat to match. Damaged areas must be abraded back to a firm edge by sanding or scraping. Small areas can be filled using A/D Firefilm® III C or A/D Firefilm® III C Putty. The topcoat should be abraded back by 1" (25.4 mm) from the damaged area. The surface must be clean and dry before re-applying A/D Firefilm® III C. The coating shall then be built back to the original thickness, allowed to dry, then overcoated with the specified topcoat or system.

TESTING / CERTIFICATION / LISTING

Underwriters Laboratories, Inc.	A/D Firefilm® III C has been tested in accordance with ASTM E-119 (UL 263) at Underwriter's Laboratories, Inc. A/D Firefilm® III C is listed by UL and ULC for the following designs: Wide Flange Columns: X639, X641, X642, X643, X645, X669, X670, Z608, Z610, Z612, Z626, Z627 HSS Columns: X642, X645, X671, X672, X673, Z611, Z617, Z628, Z629, Z630 Beams/Floors: D941, D948, F906, F910, F912 *The product should be applied in accordance with the appropriate design.
Interek	A/D Firefilm® III C has been tested in accordance with ASTM E-119 at Intertek Laboratories. A/D Firefilm® III C is listed by Intertek for the following designs: Wide Flange Columns: AD/IMF 180-01 HSS Columns: AD/IMF 90-01, AD/IMF 120-02, -03 Beams/Floors: AD/IMF 120-01 *The product should be applied in accordance with the appropriate design.
City of New York	MEA No. 108-94-S-4 (Beams) MEA No. 242-92-S-7 (Columns)
City of Los Angeles	Report: RR25440
FM Global	Column Protection Method: 5,6,7,8,9,10 Beam Protection Method: 31

PACKAGING, HANDLING & STORAGE

Shipping Weight (Approximate)	3.78kg/L (12 lb/gal)
Storage	Store indoors in a dry environment between 1°C - 38°C (33°F - 100°F). Protect from freezing.
Shelf Life	6 Months (when kept at recommended storage conditions and original unopened containers.)
Packaging	18.9L (5 US gallons)

WARRANTY

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