

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 Putty 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 for patching and repairing of A/D Firefilm® III C fireproofing on interior steel beams, columns, tubes, and pipes in clean room and sterile environments.
Features	<ul style="list-style-type: none"> • UL/ULC, ITS, ICC-ES and FM Listed –designs for many types of steel sections. Up to 3-hour fire resistive 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 colours. • 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
Color	White
Finish	Smooth
Primers	A/D Firefilm® III C Putty 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 Putty. 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 Putty 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: $WFT=(DFT/Volume\ Solids)\times 100$
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.
Solid(s) Content	By Volume 65%
VOC Values	As Supplied 20g/L (0.17 lb./gal)
Limitations	A/D Firefilm® III C Putty is intended for patching and repairing of A/D Firefilm® III C only. 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 Putty 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	3.9 MPa (575 psi) minimum
ASTM E-761 Compressive Strength	5.2 MPa (757 psi)
ASTM E-84 Surface Burning	Class A
Density	1425 kg/m ³ (89 pcf)

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

MIXING & THINNING

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

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

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:

Trowel | Repairs shall be made by trowel, putty knife or taping knife.

APPLICATION PROCEDURES

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
 1 coat per day
 *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 Putty 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 movement and thinner coats will assist drying. The next coat of A/D FIREFILM® III C Putty can be applied when the previous 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 | All tools should be cleaned at least once per day with water.

Safety | Follow all safety precautions on the A/D Firefilm® III C Putty Material Safety Data Sheet. It is recommended that personal protective equipment be worn, including spray suits, gloves, eye protection and respirators.

Ventilation | In enclosed areas, ventilation shall not be less than 4 complete air exchanges per hour until the material is dry.

Caution | All adjacent and finished surfaces shall be protected from damage and waste.

MAINTENANCE

General | If coating becomes damaged, rebuild required thickness by trowel. Refer to the A/D Firefilm® III C Patch and Repair Guide. Small areas can be filled with trowel. A/D Firefilm® III C Putty is available for this purpose. When dry, smooth and finish with approved topcoat to match.

TESTING / CERTIFICATION / LISTING

Underwriters Laboratories, Inc. | A/D Firefilm® III C Putty has been tested in accordance with ASTM E-119 (UL 263) at Underwriter's Laboratories, Inc. A/D Firefilm® III C Putty 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 Putty has been tested in accordance with ASTM E-119 at Intertek Laboratories. A/D Firefilm® III C Putty 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

ICC-ES | ESR-1973

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

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline[®] and Nullifire[®] are registered trademarks of Carboline Company.