

SELECTION & SPECIFICATION DATA

Generic Type	A/D Type FP is a sprayed fire resistive material intended for application to structural steel, concrete and other substrates. It provides excellent fire protection, thermal insulation and acoustic properties in one, high quality, 100% asbestos-free product.
Description	A/D Type FP is a noncombustible blend of mineral wool, Portland cement and proprietary ingredients. Factory blended, it requires only the addition of water at the job site.
Colour	Grey
Insulation	As insulation, A/D Type FP provides a R value of R4 per inch ("K" value 0.25). This eliminates cold floors – for a much more comfortable environment – and also reduces energy costs. Being noncombustible, it needs no flame retardant additives and remains, permanently fire resistive. Because of its sprayed joint-free application, it provides a continuous blanket of insulation, without thermal bridging through gaps and metal pins. And because it does not support fungus growth it is ideal for food storage. In tests by the ORTECH International (O.R.F), it maintained 97% of its thermal resistance in an environment with R.H. of 95%.
Acoustical Treatment	A/D Type FP can be applied to render a monolithic textured finish with high sound absorbency. Refer to Table 3.
Sound Isolation Data	A/D Type FP is a highly efficient and low cost sound barrier. 25 mm (1 inch) of A/D Type FP can provide an STC up to 52. Cutouts for electrical boxes and joints are completely sealed by the spraying operation. The following STC values resulted when A/D Type FP was applied to the interior face of a partition consisting of a single layer of gypsum board on a metal or wood stud frame and tested in accordance with ASTM E90. Contact A/D for sound transmission loss data at specific frequencies.
Finishes	A/D Type FP finishes vary according to particular end use requirements and application techniques. For normal fireproofing installations the product is sprayed to the required density and water tamped. Where a harder finish is required the product may be board tamped and / or sealed at additional cost. A/D Type FP is normally left as a sprayed texture finish. Surface may be oversprayed with A/D Type TC-55 Sealer to encapsulate material or to act as a barrier for the application of paint to prevent saturating the material. Paint must be latex based and have a flame spread rating of 200 or less. Note: If surface of Type FP has dried, dampen the surface with water prior to application of A/D Type TC-55 Sealer.
Primers	Primers are not recommended or required, except as described below. If a primer is required, contact A/D Technical Service for recommendations. Type TC-55 Sealer may be used as a primer/bonding agent on all substrates per ULC design requirements.
Fireproofing Topcoats	Generally not required. In severely corrosive atmospheres, consult A/D Technical Service for selection of coating most suitable for the operating environment.
Limitations	A/D Type FP is not intended for direct exposure to weather or excessive physical abuse. Contact your A/D representative for alternative product recommendations.

SUBSTRATES & SURFACE PREPARATION

General	Surfaces to receive A/D Type FP must be free of dirt, oil, grease, loose scale or other substances that may impair adhesion. Surfaces may be sprayed with A/D Type TC-55 adhesive per design requirements. Hangers, clips or other attachments must be in place prior to fireproofing application.
Painted/Primed Steel Decks	A/D Type FP may be applied to painted/primed steel decking only if permitted by the ULC design. If the painted/primed deck is not an approved substrate, metal lath must first be secured to the deck surfaces in accordance with the ULC requirements.
Painted/Primed Steel Joists	Painted steel joists do not require adhesive, lath or fastening devices. It is acceptable to apply Type FP directly to steel joists.

**Painted/Primed
 Structural
 Steel**

Painted/primed structural steel is generally not approved by ULC as an acceptable substrate for sprayed fire resistive materials unless the paint or primer was included in the fire test and or a UL listed Primer for Structural Steel. ULC has established conditions that must be satisfied for application to primed or painted structural steel, including: minimum bond strength criteria; dimensional limitations for the structural members; use of a bonding agent or adhesive; use of metal lath to provide a mechanical bond; or, use of mechanical breaks of metal lath strips or steel pins and disks. Refer to the ULC Fire Resistance Directory for details or contact A/D Technical Service before applying Type FP to any painted / primed steel beams or columns.

PERFORMANCE DATA

PHYSICAL PROPERTIES (Table 1)

Property/Test	Results
Density, ASTM E605	165 kg/m ³ (10.1 lb/ft ³)
Combustibility, CAN4-S114	Passed, noncombustible
Combustibility, ASTM E136	Passed, noncombustible
Compressive Strength, ASTM E761	9.8 kPa (205 lbf/ft ²)
Cohesion Adhesion, ASTM E736	9.7 kPa (203 lbf/ft ²)
Impact, ASTM E760	Passed
Deflection, ASTM E759	Passed
Air Erosion, ASTM E859	0.235 g/m ² (0.02 g/ft ²) @ 24hr
Surface Burning, CAN/ULC-S102	Flame Spread: 0, Smoke: 0
Surface Burning, ASTM E84	Flame Spread: 0, Smoke: 0

SOUND TRANSMISSION (Table 2)

Gypsum Board Thickness	A/D Type FP Thickness	STC
2-1/2" (63 mm) metal studs, 24" (610 mm) O.C.		
13mm (1/2")	13 mm (1/2")	45
13mm (1/2")	22 mm (7/8")	48
16 mm (5/8")	19 mm (3/4")	48
16 mm (5/8")	25 mm (1")	51
50x100 mm (2" x 4") wood studs, 406 mm (16") O.C.		
16 mm (5/8")	25 mm (1")	52

SOUND ABSORPTION DATA (Table 3)

A/D Type FP Thickness	Mounting Method	Coefficient of Sound Absorption						NRC
		Frequency (Hertz)						
		125	250	500	1000	2000	4000	
10mm (3/8 in.)	Solid	.28	.18	.28	.48	.74	.94	.45
13mm (1/2 in.)	Solid	.28	.21	.42	.72	.92	1.04	.55
25 mm (1 in.)	Solid	.25	.37	.81	1.01	1.02	1.05	.80
25 mm (1 in.)	Metal Lath	.35	.96	1.03	.95	.96	1.05	1.00

Tests carried out by the National Research Council of Canada in Ottawa, Nov. 8, 1989

APPLICATION EQUIPMENT

The following are general equipment guidelines for the application of this product. Job site conditions may necessitate modifications to these guidelines to achieve desired results.

Machines	Type FP can be applied with various machines Such as: Unisul – All pneumatic Fireproofing Machines Boss- small projects Krendal Cool Machines
Hoses	Use 61-75m (200-250 ft.) of 64-76mm (2½ -3") I.D. flexible hose. Hose must be reinforced to resist kinking or cracking and must resist static build-up. The hose interior must be smooth rubber or plastic to prevent clogging and reduce static build-up.
Whip Hose	Use 60mm (24") long lightweight and flexible whip hose with a diameter of 51-64mm (2 - 2½"). The hose interior must be smooth rubber or plastic to prevent clogging and reduce static build-up
Nozzle/ Gun	64mm (2-1/2") I.D High Output Air/Water nozzle manufacturer by Hydra-Cone The use of an expander sleeve is recommended to provide an even spray pattern.
Reservoir Tank	To ensure proper water pressure and volume a 208L (55 US gal.) reservoir tank is recommended.

MIXING

General | When mixing the material, empty one bag of material into machine hopper at a time. When the hopper is one quarter full, empty the next bag into the hopper. Some hoppers can hold more than one bag of material.

APPLICATION PROCEDURES

General | A/D Type FP is applied only by authorized applicators using specific "dry-mix" type fireproofing equipment. Thicknesses of 25mm (1 inch) or less can typically be applied in one pass. For thicknesses of greater than 25mm (1 inch), apply subsequent coats after the prior coat has set. If preceding coat has dried, dampen the surface with water prior to application of additional coats.
A/D Type TC-55 Sealer may be used as an adhesive to aid in the adhesion of the material to substrates. Use only potable water (drinking quality).
Type FP should not be sprayed over 63mm (2½") without adhesive or 76mm (3") without support. Metal lath or steel pins can be used for support.
Apply product at a distance of 38cm-61cm (15"-24") from substrate surface to achieve a uniform texture. Thickness should be applied as required by ULC design.
To ensure a uniform finish be sure to overspray Type FP with water before the end of the work day
Adjacent surfaces shall be protected from damage and overspray. Sprayed fireproofing materials may be difficult to remove from surfaces and may cause damage to architectural finishes.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	4°C (40°F)	4°C (40°F)	4°C (40°F)	0%
Maximum	38°C (100°F).	52°C (125°F).	43°C (110°F)	95%

*A/D Type FP must be protected from rain and running water. Air and substrate temperatures shall be maintained 24 hours before, during and 24 hours after application. Contact A/D Technical Service for recommendations.

MAINTENANCE

General | No maintenance should be required. Damaged caused by other trades should be patched at the expense of trade causing damage.

TESTING / CERTIFICATION / LISTING

Underwriters Laboratories of Canada | Tested in accordance with CAN/ULC-S101 at Underwriters Laboratories, Inc. and listed by ULC in the following designs (most common in bold):
Protected Floor/Ceiling: F817, F818 (Restrained/Unrestrained) Additional designs: D842, D848, D849, F803, DF804, F808, F809, F811
Unprotected Floor/Ceiling: F906 (Restrained/Unrestrained)
Concrete Floor/Roof: I800 (Restrained/Unrestrained)
Beams: N809, N810 (Restrained/Unrestrained)
Protected Roof/Ceiling: R806 (Restrained/Unrestrained)
Metal Wall Assembly: W802 (Restrained/Unrestrained)
Wide Flange Columns: Z805, X820, X821, X822.
Pipe & Tube Columns: Z806, Z807, Z810.

CLEANUP & SAFETY

Cleanup | Cured overspray material must be rewetted before cleaning to reduce the amount over airborne fibres. Removing overspray from substrate can be done by scraping or sweeping.

Safety | Follow all safety precautions on the Safety Data Sheet (SDS.) It is recommended that personal protective equipment be worn, including spray suits, gloves, eye protection and respirators.
Do not breathe dust. Use OSHA approved dust mask. Safety goggles or glasses should be worn. For eye contact, flush with copious amount of water in accordance with OSHA instructions.
Wash skin with clean water to prevent irritation.
Follow equipment manufacturers' recommendations regarding safety and maintenance.

Ventilation | Ventilation in enclosed areas is very important, to assist products to set and dry properly. Total air exchange should be at least 4 times per hour. This is especially applicable in humid conditions.
In enclosed areas, ventilation shall not be less than 4 complete air exchanges per hour until the material is dry. Air and substrate temperatures shall be 4°C (40°F) minimum, and shall be maintained 24 hours before, during and for 24 hours after spraying occurs.

PACKAGING, HANDLING & STORAGE

Shipping Weight (Approximate) | 18.6-kg (41 lb.)

Storage | Store indoors in a dry environment between 0°C to 52°C (32°F to 125°F)

Shelf Life | 12 months

Packaging | 18.6-kg (41 lb.) polyethylene bags

WARRANTY

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