

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	A/D Cementitious Thermal Barrier is a single component, factory blended fire resistive cementitious coating specifically formulated to protect foamed plastic insulation from fire in accordance with the requirements in Canadian Building Codes.
<b>Description</b>	A/D Cementitious Thermal Barrier is a proprietary blend of Portland cement, vermiculate and other ingredients. A/D Cementitious Thermal Barrier requires only the addition of water at the job site.
<b>Features</b>	<ul style="list-style-type: none"> <li>• 10 minute thermal barrier protection</li> <li>• Damage resistant and permanent.</li> <li>• Noncombustable.</li> <li>• High Build</li> <li>• Moisture Resistant</li> <li>• Asbestos-free – complies with WHMIS, EPA and OSHA regulations.</li> <li>• Mineral Wool free – no airborne fibers.</li> <li>• Styrene free – no toxic decomposition gases.</li> <li>• Economical – Maintains project on budget.</li> </ul>
<b>Colour</b>	Gray Product color may vary due to variations in color or Portland cement.
<b>Finish</b>	Textured
<b>Primers</b>	A/D Type TC-55 Sealer is used as a primer/bonding agent where specified for use over foam plastic insulation. A/D Cementitious Thermal Barrier is applied over the A/D Type TC-55 Sealer while the primer/bonding agent is still tacky. Contact A/D Fireproofing Technical Service for further information.
<b>Fireproofing Topcoats</b>	Generally not required. In severely corrosive atmospheres, consult A/D Technical Service for selection of coating most suitable for the operating environment.
<b>Application Thickness</b>	18 mm (¾")
<b>Limitations</b>	Not intended for permanent direct exposure to weather, exterior use or excessive physical abuse beyond normal construction cycles. Not recommended for use as refractory cement or where operating temperatures exceed 93°C (200°F). Certain food processing facility applications will necessitate a topcoat. Contact your A/D representative for topcoat or alternate recommendations.

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	Prior to application, all substrates must be clean and free of loose scale, dirt, oil, grease, condensation, or any other substance that would impair adhesion. Contact A/D Technical Service for further information.
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## PERFORMANCE DATA

Property	Result
ASTM E605, Dry Density	370 kg/m <sup>3</sup> (23 lb/ft <sup>3</sup> ) min. individual
ASTM E736, Cohesion/Adhesion	60 kPa (1260 lbf/ft <sup>2</sup> )
ASTM E761, Compressive Strength	910 kPa (19008 lbf/ft <sup>2</sup> )
ASTM C569, Penetration Resistance	2778 kPa (403 lb/in <sup>2</sup> )
CAN/ULC-S102, Surface Burning Characteristics Flame Spread and Smoke Development	0 & 0
CAN4-S124, Protective Coverings for Foamed Plastics	Classification: B

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

**MIXING**

<b>Mixer</b>	<ol style="list-style-type: none"> <li>1. Use a minimum 340-453 liter (12-16 cubic foot) heavy-duty mortar mixer capable of rotating at 40 rpm with rubber tipped blades that wipe the sides.</li> <li>2. Use continuous feed mixer. Contact A/D Technical Service for recommendation. Densities may vary when using this type of mixing equipment.</li> </ol>
<b>Mixing</b>	<p>Always mix with clean potable water. The mixer shall be kept clean and free of any previously mixed materials which may cause premature setting of product. A 2 bag mix is recommended for paddle type mixers. Mix time should be approximately 1.5 minutes at 40 rpm. Do not over mix. The material volume should not go over center bar of mixer. Use 37.8 to 41.6 liters (10 to 11 gallons) of water per 22.7 kg (50 lb.) bag. Add water to the mixer first with blades stopped. With mixer turned on, add material to the water and begin mixing.</p>
<b>Density</b>	<p>For information and recommendations obtaining the proper density and yield, contact the local A/D Fire representative or A/D Fireproofing Technical Service.</p>

**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.

<b>Pumps</b>	<p>This material can be pumped with a wide range of piston, rotor stator and squeeze pumps designed to pump cement &amp; plaster materials including:                  Essick - model# FM9/FM5E (Rotor Stator/2L4)                  Putzmeister - model# S5EV(Rotor Stator/2L6)                  Hy-Flex - model# HZ-30E(Rotor Stator/2L6)                  Hy-Flex - model# H320E (Piston)                  Strong Mfg. - model# Spraymate 60 (Rotor Stator/2L6)                  Airtech - model# Swinger (Piston)                  Mayco - model# PF30 (Dual Piston)                  Thomsen - model# PTV 700 (Dual Piston)                  Marvel kit must be removed from piston pumps.</p>
<b>Ball Valves</b>	<p>Ball valves should be located at the manifold and at the end of the surge hose to facilitate cleaning of the pump and/or hoses.</p>
<b>Material Hose</b>	<p>Use 4.5 m to 7.6 m (15 to 25 feet) of 76 mm (3") I.D. or larger surge hose from the manifold. Follow with a 406 mm (16") tapered fitting to a 50 mm (2") I.D. hose to the spray area. Taper to 4.5 m to 6 m (15 to 20 feet) of minimum 1-1/4" or 1" (25 mm) whip hose.</p>
<b>Standpipe</b>	<p>Use 76 mm (3") I.D. aluminum tubing with quick external disconnections. Elbows should be 76 mm (3") I.D. with minimum 0.9 m (36").</p>
<b>Nozzle/Gun</b>	<p>Use a minimum 25 mm (1") I.D. plaster type nozzle with shut off valve, swivel and air shut off valve.</p>
<b>Orifice Size and Shields</b>	<p>9.5 mm - 15.9 mm (3/8 to 5/8") I.D. "blow-off" tips (mini shields optional)</p>
<b>Compressor</b>	<p>Compressor on pump must be capable of maintaining minimum 206 kPa (30 psi) and 9 to 11 cfm at the nozzle.</p>
<b>Air Line</b>	<p>Use 15.9 mm (5/8") I.D. hose with a minimum bursting pressure of 689 kPa (100 psi).</p>

**APPLICATION PROCEDURES**

<b>General</b>	<p>Thicknesses of 18 mm (¾") or less can be applied in one pass. When additional coats are required to reach specified thickness, apply subsequent coats after prior coat has set. If preceding coat has dried, dampen the surface with water prior to application of additional coats.</p>
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**Field Tests** | Test for thickness and density in accordance with the applicable building code, *AWCI Technical Manual 12-A Standard Practice for the Testing and Inspection of Field Applied Sprayed Fire-Resistive Materials, an Annotated Guide*, and *ASTM E605 Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Materials Applied to Structural Members*.

**Finishing** | Normally left as a sprayed texture finish.

## 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%

Air and substrate temperatures shall be maintained 24 hours before, during and 24 hours after application. Contact A/D Technical Service for recommendations.

## CURING SCHEDULE

Surface Temp. & 50% Relative Humidity	Dry to Recoat
25°C (77°F)	4 hours

Recoat times will vary based upon ambient conditions and air movement. Once the product has set, it is suitable for general purpose areas with prolonged exposure to moisture or high humidity.

## CLEANUP & SAFETY

**Cleanup** | Pump, mixer and hoses should be cleaned with potable water. Sponges should be run through the hoses to remove any material remaining in the hoses. Wet overspray must be cleaned up with soapy or clean, potable water. Cured overspray material may be difficult to remove and may require chipping or scraping to remove.

**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.

**Overspray** | 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.

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

## TESTING / CERTIFICATION / LISTING

**ULC** | A/D Cementitious Thermal Barrier has been tested in accordance with CAN4-S124, "Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastics"

## PACKAGING, HANDLING & STORAGE

**Shipping Weight (Approximate)** | 22.7 kg (50 lb.)

**Storage** | Store indoors in a dry environment between 0°C - 52°C (32°F - 125°F). Material must be kept dry or clumping of material may occur.

**Shelf Life** | 12 Months

**Packaging** | 22.7 kg (50 lb.) Bags

## 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.