

Selection & Specification Data

Generic Type	A Portland cement based, Spray-applied Fire Resistive Material (SFRM) formulated to provide thermal barrier fire protection.
Description	A 22 lb./ft ³ (352 kg/m ³) density (average) SFRM designed for use as a thermal barrier fire protection material over foam plastics. A secondary use is for fire protection of steel. It was specifically formulated to resist exposure to high humidity and moisture and for direct application to rigid foam plastic urethane, and polystyrene insulation. Southwest Type 7TB is a trademark of the Southwest Fireproofing Products Company.
Features	<ul style="list-style-type: none"> • 15 minute thermal barrier protection • Damage resistant and permanent • Noncombustible • High build • Moisture resistant • Asbestos-free – complies with EPA and OSHA regulations. • Mineral Wool free – no airborne fibers. • Styrene free – no toxic decomposition gases. • Economical – Maintains project on budget.
Color	Gray Product color may vary due to variations in color or portland cement.
Finish	Textured
Primer	A/D Type TC-55 Sealer is used as a primer/bonding agent where specified for use over foam plastic insulation. Southwest Type 7TB is applied over the A/D Type TC-55 Sealer while the primer/bonding agent is still tacky. Contact Carboline Fireproofing Technical Service for further information. Southwest Fireproofing materials neither promote nor prevent corrosion. Fireproofing should not be considered part of the corrosion protection system.
Fireproofing Topcoats	Generally not required. In severely corrosive atmospheres, consult Carboline Technical Service for selection of coating most suitable for the operating environment.
Application Thickness	3/4" (19 mm) 3/4" (19 mm) thickness provides 15 minute thermal barrier over urethane and polystyrene foam plastic insulation.
Limitations	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 200°F (93°C).

Substrates & Surface Preparation

General	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 Carboline Technical Service for further information.
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Performance Data

Test Method	Results
ASTM C569 Penetration Resistance	54,032 psf (2,587 kPa)
ASTM E136 Combustibility	Passed (non-combustible)
ASTM E605 Density ¹	22 pcf (352 kg/m ³) Average
ASTM E736 Cohesion/Adhesion	1,260 psf (60 kPa)
ASTM E761 Compressive Strength	19,008 psf (910 kPa)
ASTM E84 Surface Burning	Over 1/2" (19 mm) polystyrene: FS: 5 / SD: 0 Over 1/2" (19 mm) urethane: FS: 10 / SD: 0
UL 1715 Corner Room Test	3/4" (19 mm) achieved 15 minute thermal barrier rating over urethane and polystyrene foam plastic insulation

¹ Air dry at ambient conditions to constant weight. Do not force cure. Use ASTM E605 Positive Bead Displacement method utilizing #8 lead shot. Test density in accordance with AWCI Technical Manual 12-A (Standard Practice for the Testing and Inspection of Field Applied Sprayed Fire-Resistive Materials, an Annotated Guide).

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

Mixing & Thinning

Mixer	<ol style="list-style-type: none"> 1. Use a minimum 12-16 cubic foot (340-453 liter) heavy-duty mortar mixer capable of rotating at 40 rpm with rubber tipped blades that wipe the sides. 2. Use continuous feed mixer. Contact Carboline Technical Service for recommendation. Densities may vary when using this type of mixing equipment.
Mixing	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 10 to 11 gallons (37.8 to 41.6 liters) of water per 50 lb. (22.7 kg) bag. Add water to the mixer first with blades stopped. With mixer turned on, add material to the water and begin mixing.
Density	For information and recommendations obtaining the proper density and yield, contact the local Carboline representative or Carboline Fireproofing Technical Service.

Application Equipment Guidelines

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.

Pump	This material can be pumped with a wide range of piston, rotor stator and squeeze pumps designed to pump cement & 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)
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SOUTHWEST TYPE 7TB™

Application Equipment Guidelines

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.

Marvel kit must be removed from piston pumps.

Ball Valves	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.
Material Hose	Use 15 to 25 feet (4.5 m to 7.6 m) of 3" (76 mm) I.D. or larger surge hose from the manifold. Follow with a 16" (406 mm) tapered fitting to a 2" (50 mm) I.D. hose to the spray area. Taper to 15 to 20 feet (4.5 m to 6 m) of minimum 1-1/4" or 1" (25 mm) whip hose.
Standpipe	Use 3" (76 mm) I.D. aluminum tubing with quick external disconnections. Elbows should be 3" (76 mm) I.D. with minimum 36" (0.9 m).
Nozzle/Gun	Use a minimum 1" (25 mm) I.D. plaster type nozzle with shut off valve, swivel and air shut off valve.
Orifice Size and Shields	9/16 to 5/8" (9.5 mm - 15.9 mm) I.D. "blow-off" tips (mini shields optional)
Compressor	Compressor on pump must be capable of maintaining minimum 30 psi (206 kPa) and 9 to 11 cfm at the nozzle.
Air Line	Use 5/8" (15.9 mm) I.D. hose with a minimum bursting pressure of 100 psi (689 kPa).

Application Procedures

General	Thicknesses of 3/4" (19 mm) 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. For complete application instructions, refer to the Southwest Fireproofing Products Field Application Manual.
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	40 °F (4 °C)	40 °F (4 °C)	40 °F (4 °C)	0%
Maximum	100 °F (38 °C)	125 °F (52 °C)	110 °F (43 °C)	95%

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

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Recoat
77 °F (25 °C)	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 Material Safety Data Sheet. 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

Underwriters Laboratories, Inc.	Tested in accordance with UL 1715 Enclosed Corner Room Test at Underwriter's Laboratories, Inc. - 15 minute thermal barrier rating at 3/4" (19 mm)
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Packaging, Handling & Storage

Shelf Life	12 months
Shipping Weight (Approximate)	50 lb. (22.7 kg)
Storage	Store indoors in a dry environment between 32°F - 125°F (0°C - 52°C) Material must be kept dry or clumping of material may occur.
Packaging	50 lb. (22.7 kg) bags



An **RPM** Company

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