SOUTHWEST TYPE 7TB™

PRODUCT DATA SHEET

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./ft³ (352 kg/m³) 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.
Features	• 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	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 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.
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).
Topcoats	Generally not required. In severely corrosive atmospheres, consult Carboline Technical Service for selection of coating most suitable for the operating environment.

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.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

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/m³) Average
ASTM E736 Cohesion/Adhesion	1,260 psf (60 kPa)
ASTM E761 Compresive 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
CAN/ULC S124	Classification B2 at 18mm thick and min. average density of 380 kg/m3
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 or 1 mm unexpanded polystyrene beads. 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
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 2 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 to obtain 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# 321E (Piston)
Hy-Flex - model# HZ-30E (Rotor Stator/2L6)
Hy-Flex - model# H320E (Piston)
Strong Mfg. - model# Spraymate 60 (Rotor Stator/2L6)

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	Airtech - model# Swinger (Piston) Mayco - model# PF30 (Dual Piston) Thomsen - model# PTV 700 (Dual Piston) Graco - F340e (Piston) Graco - F800e (Dual Piston) 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 2" transfer hose for maximum practical length to spray area. Follow with a 16” (406 mm) tapered fitting to a 1-1/2” (38.1 mm) I.D. hose for 50' (15.2 m). Then taper to 1-1/4” (31.8 mm) for 25'. Then taper to a 1” (25 mm) whip hose for 15' to 20' (4.6 m - 6.1 m). All connections should have conical tapered fittings.
Standpipe	Use 2” (50.8 mm) I.D. aluminum tubing with quick external disconnections. Elbows should be 2” (50.8 mm) I.D. with minimum 36” (0.9 m) lengths.
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.
Finishing	Normally left as a sprayed texture finish.
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).

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.	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.

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)
Tested per ASTM E119/UL 263 at Underwriter's Laboratories, Inc. and listed by UL in the following designs:
Columns: X737
Tested per CAN/ULC-S124 'Protective Coverings for Foamed Plastic Certified for Canada' at Underwriter's Laboratories, Inc.
- Classification B2 10 minute thermal barrier rating at 18 mm and minimum average density of 380 kg/m3 per CAW0C.R20000

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

Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation. Keep container closed when not in use.

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

When used in enclosed areas, thorough air circulation must be used during and after application until the product is dry.

PACKAGING, HANDLING & STORAGE

Packaging

50 lb. (22.7 kg) bags

Shelf Life

12 months

Storage

Store indoors in a dry environment between 0°F - 125°F (-18°C - 52°C)

Material must be kept dry or clumping of material may occur.

Shipping Weight (Approximate)

50 lb. (22.7 kg)

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 to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. 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. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.