

THERMAFIBER[®] SMOKE SEAL[™] Compound



For resistance to smoke infiltration through firestop systems

- Demonstrated to significantly reduce gas flow rate through firestops in third-party independent testing.
- Less expensive than competitive caulks while providing the same fire-resistive performance.
- Simple to install using 30 oz. caulking tubes or 5-gal. pails for large jobs; ready-mixed material goes on quickly with no need for mixing or adding water.
- Efficient sound performance—provides a tight seal to prevent sound leakage around openings.
- Product has met all of the conditions of UL 1479, ASTM E814 and CAN-S115 in tests conducted at Underwriters Laboratories. Two UL-Classified through-penetration systems are available.

Description

THERMAFIBER[®] SMOKE SEAL[™] Compound is an elastomeric acrylic water-based caulking material that is applied over a fire-resistant forming material. Fire/smoke-stop systems with this product are available for through-penetrations in walls and floor-ceilings and for perimeter fire-containment systems. THERMAFIBER SMOKE SEAL Compound is flexible, yet it effectively bonds to system perimeter to keep the firestop in place. It is especially formulated to stop smoke. Both UL tests for this product include THERMAFIBER[®] Safing Insulation as the forming material.

Effective in through-penetration wall and floor applications in stopping the spread of both fire and smoke when used with THERMAFIBER Safing Insulation. Tests include UL System CAJ-1020 for floor and wall assemblies (3-hr. F rating, 3/4-hr. T rating) and WL-1064 for wall assemblies (2-hr. F rating, 0-hr. T rating).

As part of THERMAFIBER[®] Life-Safety Fire Containment Systems, adds resistance to smoke infiltration. At slab perimeters, THERMAFIBER SMOKE SEAL Compound is used to seal the foil backing of THERMAFIBER Safing Insulation to both the foil backing of the THERMAFIBER Curtain Wall Insulation and the floor slab. The sealed foil completely bridges the top of the opening between the slab and the curtain wall, effectively eliminating the passage of smoke through this area. Unfaced THERMAFIBER Safing Insulation can also be used at slab perimeters when topped off with a 1/2" layer of SMOKE SEAL Compound.

Installation

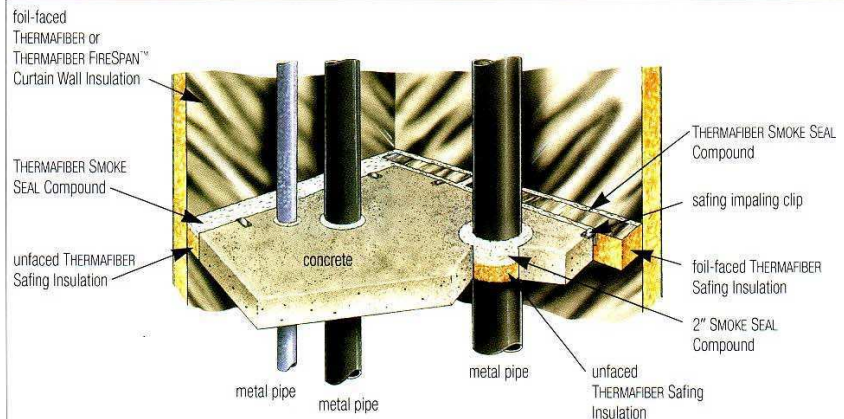
Fire-resistant sealant application at floor penetrations: Install through-penetration fire/smoke stop of THERMAFIBER Safing Insulation minimum 2-1/2" thick, followed by top surfacing of THERMAFIBER SMOKE SEAL Compound minimum 2" deep. Cut the safing slightly wider than the opening for a good fit, then compress and fill the entire floor opening around steel or metallic piping with both safing and compound. THERMAFIBER SMOKE SEAL Compound may be trowelled into through-penetrations using a trowel, putty knife or spatula. It may also be applied using a standard caulking gun.

Fire-resistant sealant application at wall penetrations: Install through-penetration fire/smoke stop using minimum 3-1/2" thickness THERMAFIBER Safing Insulation sandwiched between minimum 1/2" thick surfaces of THERMAFIBER SMOKE SEAL Compound each side. Cut the safing slightly wider than the opening for a good fit, then compress and fill the entire wall opening around all piping with both safing and compound. THERMAFIBER SMOKE SEAL Compound may be trowelled into through penetrations using a trowel, putty knife or spatula. It may also be applied using a standard caulking gun.

Curtain wall safe-off applications: When using foil-faced THERMAFIBER Safing Insulation for slab-edge areas adjacent to curtain walls, seal all joints with a 3/8" bead of THERMAFIBER SMOKE SEAL Compound using a standard caulking gun. When using unfaced safing, apply a 1/2" layer of THERMAFIBER SMOKE SEAL Compound over the entire safing surface between the slab edge and the curtain wall insulation.

Figure 1.

Illustration shows THERMAFIBER Safing Insulation and THERMAFIBER SMOKE SEAL Compound used for both perimeter and selected poke-through protection.



Technical Data

Tests were conducted to determine the resistance of THERMAFIBER SMOKE SEAL Compound to smoke infiltration. In one test, Sample A used foil-faced THERMAFIBER Safing Insulation cut and fit into an opening such that a 1/8" wide gap was left around the perimeter of the insulation. This gap was sealed with THERMAFIBER SMOKE SEAL Compound. In the test, only 0.009 cu. ft./min. flow of smoke passed through the assembly. In Sample B, unfaced THERMAFIBER Safing Insulation was cut oversize and compressed into the opening. No perimeter gap remained and no THERMAFIBER SMOKE SEAL Compound was used. The flow rate of smoke through this assembly was 2.75 cu. ft./min., which is 305 times greater than that permitted by the Sample A assembly.

Product Data

Material: Elastomeric acrylic water-based caulking material.
Color: Gray.
Shel Life: Up to one year from date of manufacture under good storage conditions. Store at moderate temperatures. Protect from freezing, extreme heat and direct sunlight.
Application Method: Standard caulking gun application or trowel.
Surface Burning Characteristics: Flame spread 0, smoke developed 0.
Curing Time: This product dries rather than cures, so drying time is affected by environmental conditions. Once a good skin forms, the material will perform well. Product remains flexible when dry.
Reaction To Other Materials: Since this is a water-based product, there should be no reaction with aluminum or stainless steel.
Adhesion To Paints: This material will adhere well to paints and primers, but these should be used only as accepted parts of a fire-rated system.
Packaging: 30-fl.-oz. Cartridge (850.5 mL); 5-gal. Pail (18.9 L).

Coverage:	Per Container	3/8" Bead	1/2" Bead
30-oz. Cartridge	54.14 cu. in.	41 lin. ft.	23 lin. ft.
5-gal. Pail	1155.00 cu. in.	870 lin. ft.	485 lin. ft.

THERMAFIBER Safing Insulation: Used as forming material in fire-smoke stop assemblies utilizing THERMAFIBER SMOKE SEAL Compound; available in thicknesses 1" to 6", 24" wide and 48" long.

Good Design Practices

1. United States Gypsum Company and Thermafiber LLC will provide test certification for published fire and structural data covering systems designed and constructed according to their published specifications. Tests are conducted on USG/Thermafiber LLC products assembled to meet performance requirements of established test procedures specified by various agencies. System performance following substitution of materials or compromise in assembly design cannot be certified and may result in failure of sound and/or fire performance under certain conditions.
2. Temperature limits—In through-floor penetrations, the upper temperature limit for SMOKE SEAL Compound is 200 °F. In through-wall penetrations, the upper temperature limit for SMOKE SEAL Compound is 150 °F.
3. Moisture limitations—SMOKE SEAL Compound is designed for intermittent water resistance only. Do not submerge or expose to water for long periods of time.
4. THERMAFIBER SMOKE SEAL Compound should not be applied to moist areas or areas continuously immersed in water.
5. The USG Fire Stop System in floor/ceiling applications is not designed to support loads from pedestrian or vehicular traffic.
6. In cold weather, installation of THERMAFIBER SMOKE SEAL Compound should not begin until the building is enclosed, with permanent heating and cooling in operation, and the building temperature maintained above 50 °F. Adequate ventilation should be provided to carry off excess moisture.
7. For additional information, see your sales representative or refer to technical folder SA707 THERMAFIBER® Life-Safety Fire Containment Systems or SA727 USG™ Fire Stop Systems in this series.

Submittal Approvals:

Job Name	
Contractor	Date

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Safety First!
 Follow good safety and industrial hygiene practices during handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.



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