

ToughRock™ Fire-Halt® Sealant Setting Compound

Manufacturer

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Description

ToughRock™ Fire-Halt® sealant is a noncombustible, gypsum-based, fast-setting compound developed for use as a firestop sealant for openings that penetrate fire-resistive assemblies. Fire-Halt is smoke and sound resistant and does not contain asbestos or PCBs. It may be used in assemblies designated as “smoke barriers” or those required to meet a sound attenuation STC rating. It seals out smoke and toxic gases, the major causes of building fire fatalities. Fire-Halt also acts to prevent dust infiltration. In addition, Fire-Halt sealant can be used in plenums or attics as a “fire-taping” compound with or without tape. Because Fire-Halt is mixed only as needed for the current application, the product is an economical alternative to expensive caulking tube products.

Product Description

Fire-Halt sealant contains glass fibers to improve crack resistance and bulking characteristics. The product is tinted a reddish color to help building officials or fire marshals distinguish it from other products. It is tough, durable and maintains its bonds to pipes and concrete through 3-hour fire and hose stream tests. Fire-Halt is manufactured under the ITS/WHI certification program. Each bag contains the ITS/WHI seal.

Product Uses

Fire-Halt sealant is used for firestopping, filling and sealing wall and floor through penetrations such as pipes, ducts, conduit, beams and telephone cables, and for filling flutes in steel decks above walls. It may also be used as a perimeter seal around steel or concrete beams and columns. Fire-Halt can be used to repair holes, cracks and other openings including gaps between floors and curtain walls and as a perimeter sealant or grout for door frames.

Product Specification

Fire-Halt has been tested in accordance with ASTM E 814, UBC 7-5 and CAN/ULC-S115 for both walls and floors. The product has passed tests for 1-, 2- and 3-hour fire ratings. ToughRock Fire-Halt is manufactured to meet or exceed the requirements of ASTM C 475 “Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.” The product conforms to the requirements of

major building codes including BOCA, ICBO and SBCCI for fire-rated assemblies. Fire-Halt sealant has a flame spread of 0 and smoke developed of 0 when tested in accordance with ASTM E 84 and is noncombustible when tested in accordance with ASTM E 136.

F and T ratings developed during the test program show a very consistent pattern. Steel and copper pipes conduct heat so well that they cannot achieve 1-hour T ratings under any circumstances. Flexible aluminum conduit T ratings are 1- and 2-hour for 2- and 3-hour F ratings respectively. PVC and PVC-jacketed phone cables perform well with Fire-Halt sealant, consistently achieving 1- and 2-hour ratings.

Fire-Halt assemblies are shown in the ITS/WHI Directory under “Firestop Systems.”

Limitations:

- Do not use in moist areas or areas continuously immersed in water.
- Dilution with water will not delay or prevent setting action.
- Not recommended for sustained extreme high temperature applications. Temperatures of penetrating elements should not exceed 140°F (65°C).

Product Application

Where penetrations occur in fire-rated assemblies, the integrity of the system must be maintained. To fully comply with tested procedures, openings in the gypsum board for pipe and conduits should be $\frac{1}{8}$ " larger than the penetrating element.

In general, use a 4" finishing knife and force a generous amount of Fire-Halt sealant into the opening. Remove excess and smooth compound flush with the surface of the gypsum board. If shrinkage occurs, a second coat may be desirable in visible areas. Once compound has set, it may be covered with a second coat even if it is not completely dry.

Walls

1 $\frac{1}{8}$ " to 1" (3 to 25 mm) annular space

For gypsum board assemblies with annular spaces not larger than 1", force a generous amount of Fire-Halt sealant the full thickness of the gypsum board into the opening with a finishing knife. Smooth compound flush with the gypsum board.

1" to 4 $\frac{5}{8}$ " (25 to 110 mm) annular space, PVC or metal pipes, telephone cables

For gypsum board assemblies with pipe/conduit penetrations or bundles of PVC-jacketed telephone cables with annular spaces up to

4 $\frac{5}{8}$ ", pack the wall cavity with any suitable damming material (crumpled newspapers, fiberglass, etc.). Using a finishing knife, cover the damming material with Fire-Halt sealant equal to the thickness of the gypsum board on both sides of the partition and smooth flush with the gypsum board.

Multiple penetrations, space up to 22 $\frac{1}{2}$ " x 9" (570 x 230 mm)

For multiple pipes, conduits and/or telephone cables through the wall, the maximum size hole is 22 $\frac{1}{2}$ " x 9". Maintain 2" minimum space between penetrating members. Pack the wall cavity with any suitable damming material (crumpled newspapers, fiberglass, etc.). With a finishing knife, cover the damming material with Fire-Halt sealant equal to the thickness of the gypsum board and smooth flush.

Concrete Floors or Walls

1/2" to 4 $\frac{1}{2}$ " (13 to 110 mm) annular space, metal pipes, PVC telephone cables

For concrete floors or walls, the minimum thickness for Fire-Halt sealant is 3". Any damming material may be used and may be removed after the sealant has set. Pour the mixed sealant around the pipes and/or cables and smooth level with the concrete.

Fluted Steel Decks

Above partitions

When both sides are to be finished, place damming material in the center of flutes, allowing $\frac{3}{8}$ " or 1" (16 or 25 mm) space for 1- or 2-hour ratings on both sides. Apply sealant as directed above for walls. When only one side is to be finished, apply damming materials, allowing 1 $\frac{1}{4}$ " or 2" (32 or 50 mm) for 1- or 2-hour ratings. Damming material may be removed. Fire-Halt sealant may be applied solid through the flute, if desired.

Mixing Instructions

- Use a clean container, such as a 5-gallon plastic joint compound pail. Measure clean (drinkable) water for mixing at a ratio of 2 quarts (2.2 L) per 8 lbs. (4 kg) of dry compound.
- Hold back approximately $\frac{1}{2}$ cup (.3 L) per 8 lbs. (4 kg) of dry compound to adjust consistency after initial mixing.
- **Always** pour dry compound into water. Agitate with “potato masher” type hand mixer until fully wetted to a heavy clay consistency—usually 2-3 minutes. Overmixing or machine mixing may accelerate set.

- Add small amounts of retained water and thin to desired consistency based on intended use.
- Use a thick mix for large holes or gaps of 1/2" or wider and a thinner mix for smaller or narrower openings.

Coverage

One pound mixed with water will fill approximately 30 cubic inches. A bag will fill approximately 450 cubic inches (8 L).

Safety Precautions:

- Use an approved dust mask while mixing or sanding this product.

Handling Precautions:

- Use at temperatures above 40°F (5°C).
- Mix only enough material that can be used in one hour as this product begins hardening in approximately one hour. Once set has

begun, Fire-Halt® cannot be removed. Final set occurs in approximately 1½ hours.

- Do not mix with any other material as set time and strength may be affected.
- Clean tools and containers immediately after use and before compound has completely set.

Finishing/Painting

Fire-Halt sealant may be painted following the usual recommended methods for gypsum board finishing. If decorating an area incorporating Fire-Halt sealant, allow sealant to dry thoroughly. Sand lightly and use a full-bodied, quality latex primer-sealer before applying final decoration. Priming will equalize the suction variation between the sealant and the paper surface of the board. If glossy paints are used in such areas as kitchens or bathrooms, skim coat joint compound over

the entire surface to reduce highlighting or joint photographing. This method is also recommended in areas with severe natural or artificial side lighting. When set (it need not be dry), a second coat may be applied, if desired. Fire-Halt sealant may be coated with ready-mix joint compound. Joint treatment must be thoroughly dry before proceeding with primer application and final decoration. When dry, Fire-Halt sealant may be painted following the usual recommended methods for gypsum board finishing.

Packaging and Storage

Fire-Halt sealant is packaged in moisture-resistant bags. Bag weight is 15 lbs. (6.8 kg), 60 bags per pallet. Store in a dry warehouse off the floor and away from exterior walls. Proper storage should give up to 9 months of shelf life.

FIRE-HALT® SEALANT APPLICATIONS					
ASSEMBLY	PENETRATING MATERIAL	ANNULAR SPACING	RATING F T		ITS/WHI LISTING
1-Hour Wall	Up to 4" Closed PVC Pipe	1/8" to 4 5/8"	60	60	GP/PV 60-03
	Up to 4" Schedule 40 Steel Pipe	1/8" to 4 5/8"	60	24	GP/PV 60-03
	Up to 4" EMT Steel Pipe	1/8" to 4 5/8"	60	16	GP/PV 60-03
	Up to 4" Copper Pipe	1/8" to 4 5/8"	60	14	GP/PV 60-03
	Up to 1" PVC Jacketed Flexible Steel Conduit	1/8" to 4 5/8"	60	16	GP/PV 60-03
	Bundle of 100 Telephone Cables	1/8" to 4 5/8"	60	47	GP/PV 60-03
	Up to 12" Diameter Steel Air Duct	1/8" to 4 5/8"	60	12	GP/PV 60-03
1-Hour Wall Group Penetrations 9" x 22 1/2" Opening	Up to 4" Closed PVC Pipe	1/8" to 20"	60	60	GP/PV 60-04
	Up to 4" Schedule 40 Steel Pipe	1/8" to 20"	60	24	GP/PV 60-04
	Up to 4" EMT Steel Pipe	1/8" to 20"	60	16	GP/PV 60-04
	Up to 4" Copper Pipe	1/8" to 20"	60	14	GP/PV 60-04
	Up to 1" PVC Jacketed Flexible Steel Conduit	1/8" to 20"	60	16	GP/PV 60-04
	Bundle of 100 Telephone Cables	1/8" to 20"	60	47	GP/PV 60-04
	2-Hour Wall	Up to 4" Closed PVC Pipe	1/8" to 4 5/8"	120	120
Up to 4" Schedule 40 Steel Pipe		1/8" to 4 5/8"	120	20	GP/PV 120-04
Up to 4" Copper Pipe		1/8" to 4 5/8"	120	14	GP/PV 120-04
3/4" Flexible Steel or Aluminum Conduit		1/8" to 4 5/8"	120	109	GP/PV 120-04
1-Hour Wood Floor	Up to 4" PVC Vent Pipe Offset	1/2" to 4"	60	60	GP/PH 60-02
	Up to 4" Schedule 40 Steel Pipe	1/2" to 4"	60	60	GP/PH 60-01
	Up to 4" Copper Pipe	1/2" to 4"	60	33	GP/PH 60-01
	Two #4 Electrical Feed Cables	1/2" to 4"	60	60	GP/PH 60-01
3-Hour Wall	Up to 4" Schedule 40 Steel Pipe	1/8" to 4 1/2"	180	27	GP/PV 180-04
	Up to 4" Copper Pipe	1/8" to 4 1/2"	180	15	GP/PV 180-04
	Up to 4" EMT Steel Pipe	1/8" to 4 1/2"	180	34	GP/PV 180-04
	Up to 1 1/2" Bundle Telephone Cables	1/8" to 4 1/2"	180	110	GP/PV 180-04
	3/4" Flexible Aluminum Conduit	1/8" to 4 1/2"	180	139	GP/PV 180-04
2-Hour Concrete Floor or Wall	Up to 4" Schedule 40 Steel Pipe	1/8" to 4 1/2"	120	32	GP/PH 120-01
	Up to 4" Copper Pipe	1/8" to 4 1/2"	120	16	GP/PH 120-01
	Up to 4" EMT Steel Pipe	1/8" to 4 1/2"	120	34	GP/PH 120-01
	1 1/2" Bundle of 25 Telephone Cables	1/8" to 4 1/2"	120	114	GP/PH 120-01
	1-Hour Wall	Fluted Steel Deck with Slip Joint	flutes	60	60
Fluted Steel Deck		flutes	120	120	GP/PV 120-02
Fluted Steel Deck with Slip Joint		flutes	120	120	GP/PV 120-03

Fire-Halt sealant thickness is equal to the thickness of the gypsum board membrane.

For technical assistance, call 1-800-225-6119 (8a.m.-6p.m. EST)
or visit our web site: www.gp.com/gypsum.



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