

# Product Data Sheet



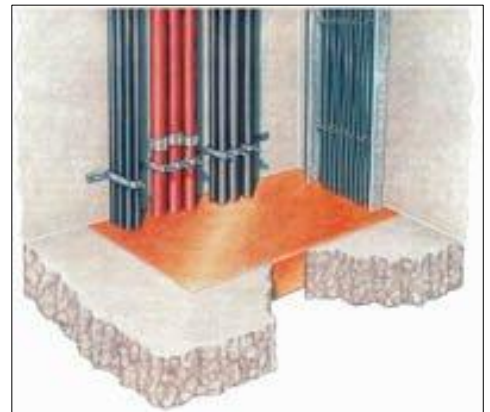
Developed, Tested & Certified to meet  
ASTM E-814  
UL 1479  
IS: 12458

## FIREX FM 71

India's Only CSIR-CBRI Roorkee – Developed, Tested & Certified Firestop Barrier

### Description

Firex FM 71 Barrier is a Inorganic, Expanding type, Heat absorbing Firestop Barrier designed to seal cable & pipe penetrations through walls, floors & ceilings and provide upto 4 hours firestop protection, to compartment walls and floors, around service penetrations.



M/s CBRI Roorkee, has in-house developed this new "state of the art" "expanding" technology firestop Barrier, considering what could be the optimum technology for mortar firestop barriers, based on all their years of experience of testing, both Indian and imported firestop Mortars, as well as of course their well established R&D strengths.

**This CBRI developed firestop mortar is amongst the most advanced firestop mortar's today available in the world and not just in India.**

M/s CBRI has Licenced this technology to us in India.

**This technology is developed, tested and certified by M/s CBRI to meet the test requirements of ASTM E-814, UL 1479, BS: 476 Part-20 and IS 12458, as a superior featured firestop barrier. The USP's of this "state of the art" FM 71 fire stop barrier technology are as follows.:**

- 1. SUPERIOR FIRE RESISTANCE :** Meets test requirements of ASTM E-814, UL-1479, BS:476 Part 20 and IS 12458. Most extensively tested. Successfully passes :
  - ★ Impact test.
  - ★ Heat ageing test.
  - ★ Vibration test.
  - ★ Water absorption test.
  - ★ Fire resistance test.
  - ★ Hose stream test post fire exposure – no cracking.



### STANVAC CHEMICALS (INDIA) LTD.

Corporate Office: 552, Sector-37, Pace City-II, Gurgaon, Haryana – 122001, India  
Ph : +91-11-24647252, 24647199, 24638360, 24652337, 24649831 Fax : +91-11-24623826, 24633847  
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- 2. UNIQUE EXPANDING TYPE NON-SHRINKING TECHNOLOGY** : Warranted seal against smoke, gas leakage etc. under fire conditions.
- 3. WEATHERING RESISTANT** : Resists relevant external influences to the same degree as the wiring system with which it is used.
- 4. ASBESTOS FREE.**

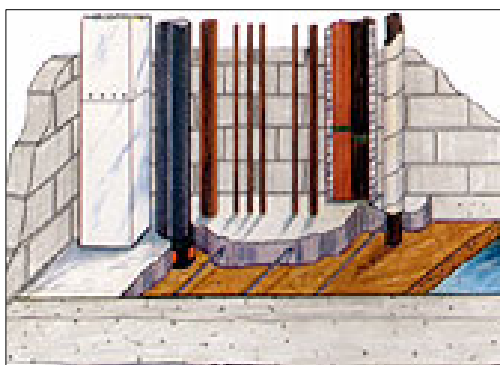
## Applications:

Firex FM 71 Fire Stop Barrier is particularly suitable for reinstalling compartment floors where HVAC ducts, plastic pipes, and electrical services have been installed. Small irregular holes and imperfections of fit can easily be repaired using Firex FM 71 Fire Stop Barrier.

FM 71 is to be focused on both wall & floor openings, both load and non load bearing or any opening where an economical firestop is needed, where a water immersion resistant firestop is needed.....



Firex FM 71 Fire stop barrier is a fire rated load bearing system providing up to 4 hours fire protection to compartment walls and floors around service penetrations.



When mixed with water it can be poured or trowelled into service penetration openings preventing the passage of flame, smoke and toxic gases for periods of up to 4 hours.

Shutter (plywood /thick thermocoal or dense mineral wool board).

Secondary reinforcement where necessary.

Thickness dependent upon fire resistance and load bearing capability.

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## INSTALLATION

**Horizontal Seals** (IMP: concrete floors with maximum opening size 600mmx1000mm and minimum 150mm thick)

- ★ Form a temporary (or permanent) shutter to the underside of the floor.
- ★ The correct amount of **Firex FM 71** Stop barrier is then mixed by hand or power mixer and cast into the aperture.
- ★ This is then tamped down, also ensuring that there are no gaps left behind penetrations.
- ★ If a temporary shuttering has been used, this is then removed.

**Vertical Seals** (IMP: Concrete wall with maximum opening size 1200mmx1000mm and 100mm thick)

- ★ Form a temporary (or permanent) shutter to one face of the aperture.
- ★ The correct amount of **Firex FM 71 stop barrier** is then mixed by hand or power mixer.
- ★ The remaining face of shuttering will be installed in stages. This will allow the compound to be poured or plastered into place and enable tamping/consolidation of the material.
- ★ The setting time of the compound may vary between 1 hour to 3 hour depending on the water content and ambient temperature.
- ★ If temporary shuttering has been used this is removed when compound is dry.
- ★ Note: For plastic pipe penetrations, see horizontal seals.



**Imp:** For large openings, to provide extra strength by reinforcement, 2-3mm thick MS angles can be provided at an additional cost.

### **FIREX FM 71 – Firestop Barriers Being Installed**



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## Technical Specifications

Physical State /Colour	Free flowing powder /Greyish
Mixing ratio(by wt.)	100 : 40 (FM-71: Water)
Flash Point	N/A
Thermal Conductivity	0.06 W/M K
CSIR-CBRI Tested & Certified To Meet	ASTM E-814 UL-1479 IS: 12458 BS-476-Part20
pH (10% sol. in water)	>8
Compressive strength	2.9 N/mm <sup>2</sup> (After 28days @ 23°C)
Bulk Density	700 - 850 Kg /m <sup>3</sup> (Approx)

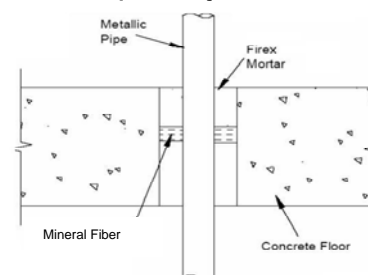


## Installation Methods

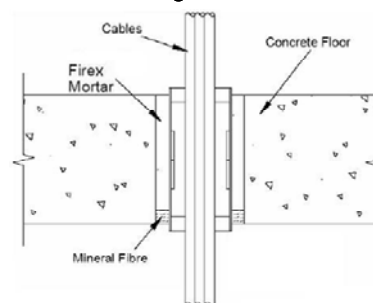
1. Ensure all service penetrations are complete and installed to the manufacturers recommendations.
2. Remove dust and debris by brushing out the opening and surrounding area.
3. Friction fit "2" thick mineral fiber batt shutter within the thickness of the floor. To ensure a good seal, Firex Intumescent Acrylic Mastic can be applied to all joints in the mineral fiber. A temporary timber /thermocool shutter can be used in place of the permanent mineral fiber, but this should be removed once the seal is cured.
4. Take required qty of FM 71 in clean container and add 35-40% water (of FM 71 qty.) and mix thoroughly, (Jiffy mixer is suitable) and after achieving uniform consistency pour slurry into cavity.

### Typical Installations

#### Metallic Pipe Through Concrete Floor



#### Cables Through Concrete Floor



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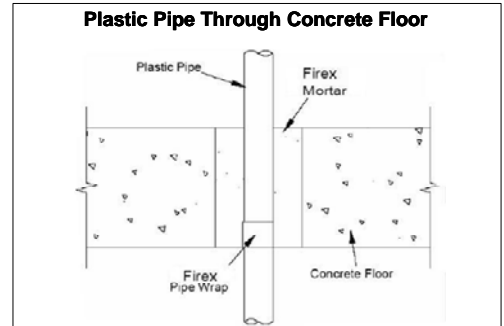
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## **IMPORTANT: ALWAYS ADD THE DRY POWDER TO THE WATER**

5. Pour or trowel apply the mix onto the mineral fiber /timber /thermocool shutter, and build up to the required thickness with further applications (if required).
6. Firex FM 71 Mortar normally sets within approximately 1-2 hrs (dependent on environmental conditions). To achieve a full cure can take up to approx. 28 days.
7. Immersion in water: Overcoat with Firex Coat for added protection.



**Packing** : - 25 Kgs Plastic Bag.

**Shelf life** :- 12 months from date of manufacture - when stored in dry conditions between 5°C and 45°C, away from sources of heat, flame and direct sun light, in the original unopened bags.

Store only in the original packaging in a location protected from moisture.

**Warranty**:- M/S Stanvac will replace any material found to be with manufacturing defect. Since the storage and handling of this material is beyond our control, we can accept no liability for the results obtained.

## **Important Notification**

The information, and, in particular, the recommendations relating to the application and end-use of STANVAC products, are given in good faith based on M/s Stanvac current knowledge and experience of the products when properly stored, handled and applied under normal conditions.

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