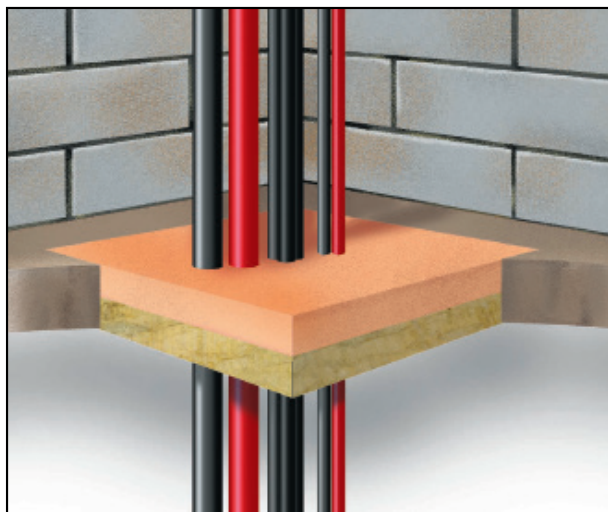


Fire Rated Mortar



product description

Abesco Fire Rated Mortar is a lightweight mortar compound which is designed to prevent the spread of fire from one compartment to another where services penetrate separating walls and floors, and provides up to 4 hours fire resistance.

Abesco FR Mortar is a pre-mixed dry blend, consisting of inorganic fillers and foamed perlite. When mixed with water it produces a trowelable or pourable grade non-spalling, thermally insulating fire seal. Whilst curing, the mortar expands by approximately 1% ensuring a tight seal around penetrations and within the opening. Once installed Abesco FR Mortar sets within approximately 30 minutes allowing works to be completed without the need to re-visit the site.

Abesco FR Mortar can be installed as a load bearing or non-load bearing seal.

- Approved worldwide and recognised by independent authorities
- Up to 4 hours fire resistance
- Can provide a load bearing seal
- Simple retrofitting of additional seals
- Expands during cure
- Easy to mix and install
- Contains no asbestos or halogens
- A non-spalling fire seal

testing

Tested in accordance with the methodology and criteria described in:

- BS 476 Part 20
- EN 1366-3
- EN 1363-1
- ASTM E814 (UL 1479)
- AS 1530-4
- SABS 0177-2



for up to 4 hours fire resistance

ordering information

Code	Description	Colour	Unit	Pallet Qty
21020	Abesco 'FR' Mortar (20kg)	Cream	20kg bag	50 bags
21025	Abesco 'FR' Mortar (25kg)	Cream	25kg bag	40 bags



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Fire Rated Mortar

installation instructions

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. For loadbearing applications, ensure that suitable reinforcement is installed in accordance with the instructions in the current FR Mortar Installation Manual.
4. Friction fit 60mm thick mineral fibre slab shutter within the thickness of the wall or floor. To ensure a good seal, Abesco FR Intumescent Acrylic Mastic can be applied to all joints in the mineral fibre. A temporary timber shutter can be used in place of the permanent mineral fibre, but this should be removed once the seal is cured.
5. Pour clean potable water into a suitable mixing vessel and add sufficient dry FR Mortar to achieve the required consistency, stirring the slurry to remove all lumps. The normal mixing ratios are:

2.5 parts FR Mortar : 1 part Water (Pourable mix)

3 parts FR Mortar : 1 part Water (Trowelable mix)

4 parts FR Mortar : 1 part Water (Hand Batch mix)

IMPORTANT: ALWAYS ADD THE DRY POWDER TO THE WATER

6. Pour or trowel apply the mix onto the mineral fibre shutter, and build up to the required thickness with further applications (if required).

seal reinforcement

Depending of the seal configuration, the period of fire resistance required, thickness of FR mortar, the aperture dimensions, and any load bearing requirement, then reinforcing materials may need to be installed. The positioning of any reinforcement must be at the mid-point of the seal.

The recommended method of providing reinforcement is by installing 10mm diameter mild steel round bar spanning the shortest distance of the aperture, supported on minimum 30mmx30mmx1.6mm mild steel angle at 400mm centres

usage calculation

The following calculation should be used to calculate the yield (number of bags) of FR Mortar to seal openings of given dimensions and required depth (the depth will depend on the required fire rating and / or any load bearing requirements of the FR Mortar seal) :-

Mean dry density (1150 KG / m³) x width x length x depth.

Example :- Opening in floor slab 0.8 m x 0.6m, depth of seal = 75mm.

Therefore, 1150 x 0.8 x 0.6 x 0.075 = 41.4 KG (1.66 Bags). (This is an approximation, actual usage will depend on mixing ratios employed).

fire performance table

	Insulation	Integrity
Mortar	240 mins.	240 mins.
Services	120 mins.	240 mins.



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application

Abesco Fire Rated Mortar is particularly suitable for reinstating compartment floors where HVAC ducts, pipes and electrical services have been installed. Small holes and imperfections of fit can easily be "made good" using Abesco Fire Rated Mortar.

Typical buildings where Abesco Fire Rated Mortar is commonly used are:

- Multi-story buildings with service risers
- Communication and Broadcasting Facilities
- Hospitals, Hotels and Apartment Blocks
- Power Stations and Control Rooms

Abesco Fire Rated Mortar can be used in walls or floors.

technical specification

Density: Typically 1000-1300kg/cu.m. (dry when cured)

Flexural Strength: 2.1 N/mm²

Compression Strength: 10 N/mm²

Shear Strength: 1.0 N/mm²

Impact Strength: 5.0 N/mm²

Thermal Conductivity: 0.3 at 3%mc w/m K

Fire Resistance: Up to 240mins Integrity & Insulation

Non-combustibility: Non-combustible BS476 Part 4

Vapour Resistivity: Nominal 500MNs/g.m.

Setting Time: 30-60 minutes

Working time can be extended up to 2 hours by re-mixing with small quantity of water if necessary every 30 minutes.

Storage: Ideally between 5°C and 35°C. 12 months shelf life provided bags are sealed and stored in dry, well ventilated conditions.

health and safety

Like all similar products, which contain lime, this material releases alkali when wet, which may cause skin irritation or burns. Wear suitable protective clothing, gloves and eye protection where possibility of splashing exists.

Wash off any material in direct contact with skin and replace any saturated clothing. If the material enters the eye immediately rinse thoroughly with clean water.

what happens in a fire

When exposed to the heat of a fire, the excellent thermal insulation properties of Abesco Fire Rated Mortar provides an effective barrier, preventing the passage of fire and smoke. Unlike sand and cement mortars or concrete, the special formulation resists shrinkage and cracking, and is not subject to spalling in a fire situation.

During installation and the curing process, Abesco Fire Rated Mortar actually expands ensuring that an excellent seal is possible even in irregular openings.

using other products with mortar

Other Abesco Fire Rated products can easily be used in conjunction with Abesco Fire Rated Mortar. For example, where plastic pipes are installed in a service riser with other services, Abesco Pipe Collars or Abesco Fire Wraps can be used with the Mortar to provide the required fire rating



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