Fire Stopping
Compartmention Systems

FLAMOSEAL MORTAR

TRIA

FLAMOSEAL MORTAR

ETA 20/1237 of 2020/12/20

description

FLAMOSEAL MORTAR is a Gypsum based mortar material, used to reinstate the fire resistance performance of floor constructions where they have been provided with apertures for the penetrations of multiple services. FLAMOSEAL MORTAR is supplied as a dry material, and is mixed with water to the required ratio prior to installation.

FLAMOSEAL MORTAR when mixed is self-supporting in a floor to spans of 1800mm. Temporary non combustible shuttering is required to support the wet weight of the FLAMOSEAL MORTAR. The seal is high strength, non-combustible and is load bearing. FLAMOSEAL MORTAR has a fire resistance to EN 1366-3 up to EI120.

intended use

The intended use of FLAMOSEAL MORTAR is to reinstate the fire resistance performance of rigid floor constructions where they are penetrated by various cables and metallic pipes.
The specific elements of construction that the system FLAMOSEAL MORTAR may be used to provide a penetration seal in, are as follows:
- Fire resistance testing to EN 1366-3.
- Classified as EI 120 using EN 13501-2.

key product points

- Rapid setting, zero shrinkage formulation - can be used as pourable or trowel grade, gas tight seals.
- Excellent workability ranging from stiff to pourable mix.
-Good load bearing performance in floor seals. (Consult TRIA Technical Department for details).
- FLAMOSEAL MORTAR is intended for sealing around all types of service installations penetrations through floors and walls, where a rigid seal is required. The unique FLAMOSEAL MORTAR enables even the most demanding applications to be covered.

mixing

FLAMOSEAL MORTAR can be mixed preferably by mechanical paddle or manually if required. Measure out the correct amount of clean water into a clean container to achieve the desired consistency.

(FLAMOSEAL MORTAR: water ratio): Pourable Mix ratio of 3 - 3½: 1 Trowelable Mix ratio of 4: 1

Gradually add the FLAMOSEAL MORTAR stirring continually. Continue mixing until the FLAMOSEAL MORTAR is mixed to a smooth even consistency. Any spillage should be wiped up with a damp cloth before setting occurs. May stain pipes and services. Mix only enough material sufficient for use within the recommended pot life (20-30 minutes). Pot life and set times will be reduced for lower water content and higher temperatures.

Installation should not be carried out when temperatures are above 35°C. Setting times are normally between 30 and 90 minutes. Warning: Do not attempt to extend working time by remixing with additional water once the mortar has started to set, as this will interfere with the setting process.
Always mix in clean buckets. Using dirty buckets containing remains of compound from earlier mixes may reduce working time.

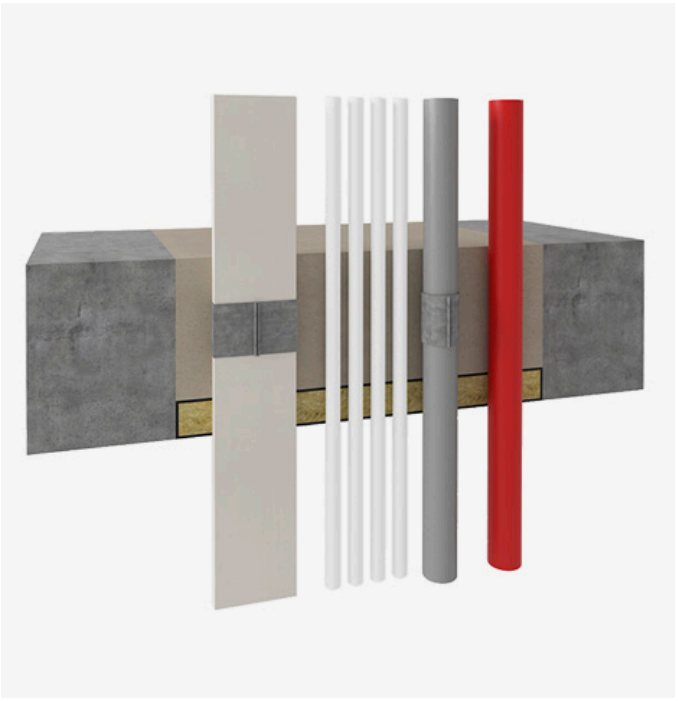
Fit damming board/shuttering to bottom of opening. Damming materials must be able to support the wet weight of the compound under pouring conditions. Pour FLAMOSEAL MORTAR to the required 100mm thickness.

wall penetrations

FLAMOSEAL MORTAR can be mixed and trowelled into a vertical opening, and worked around services without slumping. They can also be cast into blocks for building into larger openings, using a stiff mix of the same compound as bedding.

load bearing floor

Seals in a concrete slab opening, e.g. within a service riser, the unique combination of structural properties of FLAMOSEAL MORTAR enables the finished seal to support considerable loads over quite large spans, without the need for steel reinforcement. Consult TRIA Technical Department for details.

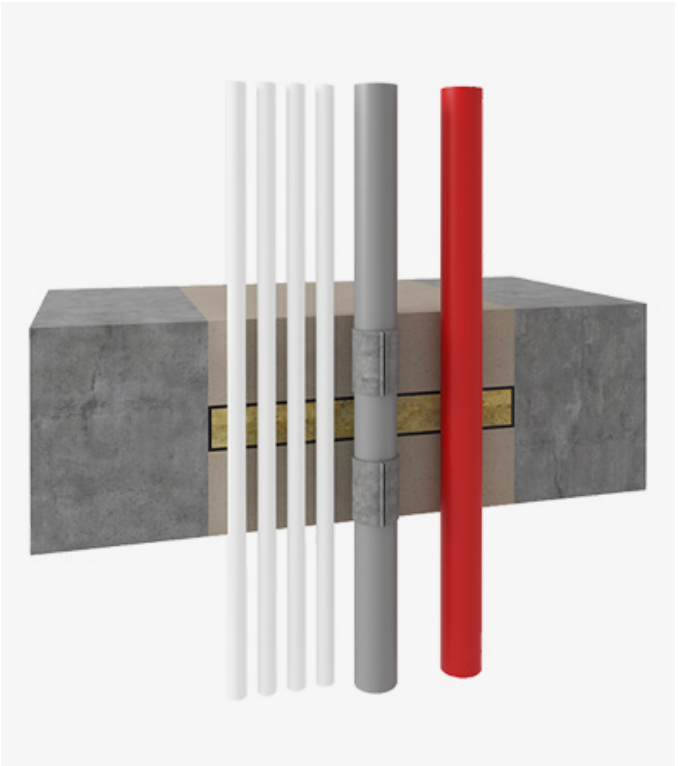


load bearing seals around unsupported fire dampers

FLAMOSEAL MORTAR has been successfully tested at BRE around both single and multiple fire damper assemblies, supported only by the compound, in wall and floor openings. The excellent crushing strength and shear resistance of FLAMOSEAL MORTAR seal ensures that the installation frame will be retained in the wall or floor if the ductwork should collapse, even when the HVAC Installation frame is not tied back to the structure.

setting and hardening

Unlike cement-based fire stopping mortars, FLAMOSEAL MORTAR will achieve maximum wet strength approximately four hours from casting.
Ultimate strength is reached when dry and fully hardened. The drying time will be dependant on the prevailing ambient conditions.
FLAMOSEAL MORTAR is available in 20kg sacks. Add powder to clean tap water to the required consistency and coverage. FLAMOSEAL MORTAR is to be installed in accordance with installation requirements. Installation details and technical support are available from TRIA Technical Department. Please contact TRIA Technical Department for load bearing calculations at all times.



PRODUCT TECHNICAL DATA - HS		
Description	Result	Test Standards
Description	Grey coloured free flowing powder.	
Density	1750-1900 Kg/m³	
Loadbearing	2.5k N/m² UDL	BS 6399-1
Fire Resistance	EI 120	EN 1366
Classification	EN 13501:2	
Acoustic Performance R'w (C; Ctr)(dB)	57 (-2;-6) dB at 100mm (With 50mm FLAMOSEAL panel	EN 10140
Max Unsupported Span	1800 mm (consult TRIA Technical Department for larger spans)	
Thermal Conductivity (U Value) @100mm	0.45 - U Value I / 'R' 4.5	
Thermal Resistance 'R' (t/k) @100mm	0.22	
Expansion on Setting (%)	0.1	
Typical Yield	± 6 Bags per m² at 100mm depth	
Expected Shelf Life before installation	At least 6 months	Stored in accordance with packaging instructions

installation

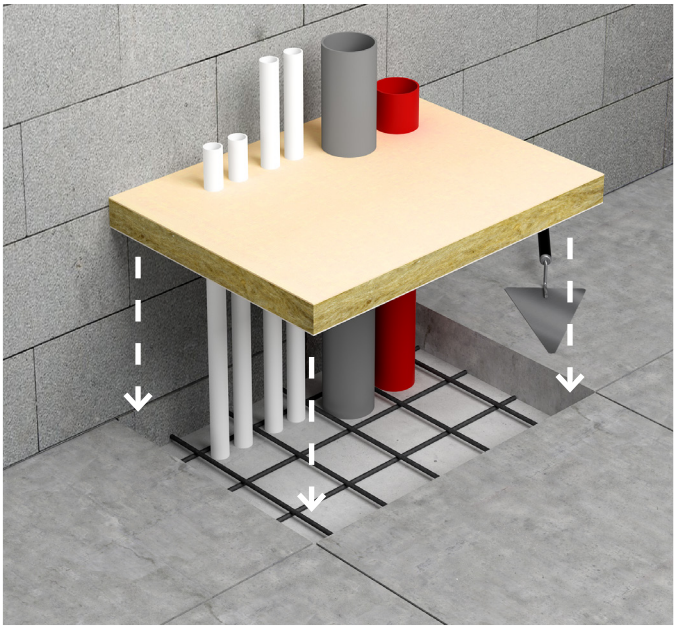
All services and apertures need to be clean and clear of all dust and loose particles. The aperture temperature needs to be at 5°C or above at time of installation. Combustible. services require closure device / material where they pass through the FLAMOSEAL MORTAR, see FLAMOCOL or FLAMOCOL W.
Upon installation make sure that you install the FLAMOSEAL MORTAR to the recommended ratio for the aperture you are installing, make sure that you fill the full depth in a single pour to create a solid structure. Minimum 100mm depth in a single pour to achieve load baring capabilities, consult TRIA for specific requirements.
Once filled smooth off the FLAMOSEAL MORTAR to produce a professional finish.

wall openings

For small holes and gaps, trowel a stiff mix into the opening to the correct depth. For larger holes, use an appropriate non combustible shuttering material to support the mix until it sets, or, if a fair faced finish is required to both sides, consider using a sandwich construction. Alternatively, the FLAMOSEAL Mortar may be pre- cast into convenient sized blocks, a stiff mix being used as a bedding mortar. All combustible services (Plastic Pipes etc.) should have a tested fire rated closure device/material fitted prior to the pouring of the FLAMOSEAL MORTAR. These are typically TRIA intumescent pipe wraps as FLAMOCOL W.

floor openings

When sealing holes in floor slabs, appropriate shuttering must be installed, cut to fit tightly around any services within the opening, to support the wet mix until it sets. Non-combustible shuttering materials, such as mineral fibre slab, can be left in place, but combustible materials must be removed, after the mix has set. For complex penetrations it may be preferable, to initially form a thin seal around all services, with a nominal 5mm layer of the FLAMOSEAL MORTAR mix. Once this has set the remaining depth of seal should be poured in one operation. All combustible services (Plastic Pipes etc.) should have a tested fire rated closure device/material fitted prior to the pouring of the FLAMOSEAL MORTAR. These are typically TRIA intumescent pipe wraps as FLAMOCOL W.



rigid floor and rigid wall

PENETRATION SEAL WITH FLAMOSEAL MORTAR INSTALLED TO 100MM DEPTH OF THE FLOOR, MAXIMUM SEAL SIZE 1800MM X 1800MM, FIRE RATING WALLS OR FLOORS EQUAL OR GREATER THAN THE SEALS.	
Penetration Specification	Classification
Copper pipe 40-107 mm Ø	EI 90
Steel pipe 40-115 mm Ø	
Steel pipe 160 mm Ø	
Electrical cables up to 80 mm Ø	
Non-sheathed wire up to 24 mm Ø	

PENETRATION SEAL WITH FLAMOSEAL MORTAR INSTALLED TO 150MM DEPTH OF THE FLOOR, MAXIMUM SEAL SIZE 1800MM X 1800MM, FIRE RATING WALLS OR FLOORS EQUAL OR GREATER THAN THE SEALS.	
Penetration Specification	Classification
Telecom cables in bundles of up to 100 mm diameter	EI 90

150mm RIGID FLOOR			
Aperture Size	Seal Composition	Services	Classification
1400mm x 700mm	The aperture was sealed with a 100mm FLAMOSEAL MORTAR. The compound was poured in around the service penetrations flush with the exposed face of the floor.	Electrical cables up to 21mm dia	EI 90
		Electrical cables 33mm to 80mm dia	
		Cable Trays and Ladders	
		100mm diameter bundle telecommunication cable type "F"	
		Unsheathed electrical cables up to 17mm dia	
		Unsheathed electrical cables 18-24mm dia	
		Steel or Copper Conduits up to 16mm	
		Plastic conduits up to 16mm	

FLAMOCOL PCP, FIXED ONTO THE UNDERSIDE ONLY OF FLAMOSEAL MORTAR WITH A MINIMUM THICKNESS OF 100MM PE, ABS & SAN+PVC PIPES							
Aperture Size	Seal Composition	Services	Collar Reference	Capping	Formation	Collar Fixing	Classification
1400mm x 700mm	The aperture was sealed with a 100mm FLAMOSEAL MORTAR. The compound was poured in around the service penetrations flush with the exposed face of the floor.	PE Pipe 32mm Ø to 160mm Ø	Flamocol PCP	U/C	Cluster Formation of Pipes with 0mm separation	Anchor Fixings	EI 120

FLAMOCOL PCP, FIXED ONTO THE UNDERSIDE ONLY OF FLAMOSEAL MORTAR WITH A MINIMUM THICKNESS OF 100MM PVC-U , PVC-C							
Aperture Size	Seal Composition	Services	Collar Reference	Capping	Formation	Collar Fixing	Classification
1400mm x 700mm	The aperture was sealed with a 100mm FLAMOSEAL MORTAR. The compound was poured in around the service penetrations flush with the exposed face of the floor.	PVC Pipe 32mm Ø to 160mm Ø	Flamocol PCP	U/C	Cluster Formation of Pipes with 0mm separation	Anchor Fixings	EI 120

FLAMOCOL PCP, FIXED ONTO THE UNDERSIDE ONLY OF FLAMOSEAL MORTAR WITH A MINIMUM THICKNESS OF 100MM PP PIPES.							
Aperture Size	Seal Composition	Services	Collar Reference	Capping	Formation	Collar Fixing	Classification
1400mm x 700mm	The aperture was sealed with a 100mm FLAMOSEAL MORTAR. The compound was poured in around the service penetrations flush with the exposed face of the floor.	PP Pipe 32mm Ø to 160mm Ø	Flamocol PCP	U/C	Cluster Formation of Pipes with 0mm separation	Anchor Fixings	EI 120

information

TRIA has Technical Representatives who provide assistance in the selection and specification of TRIA products. For more information, specification and technical advice please call our Head Office geral@tria.pt. Guarantee / Warranty: TRIA products are manufactured to rigid standards of quality.
Any product which has been applied in accordance with TRIA's written instructions and in any application recommended by TRIA, but which is proved to be defective in product quality, will be replaced free of charge. No liability can be accepted for the information provided in this document although it is published in good faith and believed to be correct. TRIA reserves the right to alter product specifications without prior notice, in line with our Company policy of continuous development and improvement.

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