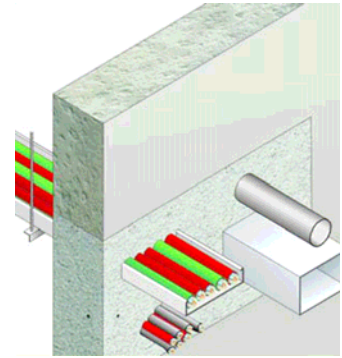


### Introduction:

PROMASEAL® Fire Compound is a specially formulated powder mortar and is supplied as a dry white powder for on-site addition of water. It can be poured or trowelled into position for sealing openings required for the passage of services through walls and floors, preventing the spread of fire and smoke into another compartment.



### PROMASEAL® Fire Compound Performance Chart:

		Penetrating Services			Fire Rating (min)	
		Maximum Aperture (mm)	Minimum seal Depth (mm)		Integrity	Insulation
	Loadbearing 1.5kN/m <sup>2</sup>		Non Loadbearing			
Walls or Floors	No service	1200	100	75	120	120
		1200	150	100	240	240
	Cables or Trunking or Dampers or Pipes** (<60mm dia.)	1200	100	75	120	0*
		1200	150	100	240	0*
<b>Maximum opening Area:</b>		1.44m <sup>2</sup> with a maximum service loading of 25% within each penetration seal				
<b>Wall thickness:</b>		The floors and walls shall be a minimum of 100mm thick. The minimum density for the concrete of the floor or wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> .				
<b>Application Technique:</b>		<p><b>Floors:</b> Temporary or permanent shuttering will be required. In all instances where the span of the PROMASEAL® Fire Compound exceeds 600mm, additional reinforcement e.g. re-bars will be necessary. For the floor seals fitted with reinforcement, the bars shall be 12mm diameter at 150mm centres. They shall be positioned at mid-thickness and supported at their ends on steel angles, typically 30mm x 30mm x 1.2mm thick, which are fastened to the concrete floor with all steel expanding anchors, at maximum 500mm centres.***</p> <p><b>Walls:</b> PROMASEAL® Fire Compound should be progressively built up in order to avoid slumping. Usually a single shuttering board is used.</p>				
<b>Service Support Requirements:</b>		In all cases the services shall be supported adjacent to either face of the penetration seal.				

\* Depends upon the service.

\*\* Plastic pipes must be fitted with suitable fire protective collars or wraps.

\*\*\* The floor seal classification of loadbearing is for light loads such as temporary foot traffic, with maximum loading of 1.5kN/m<sup>2</sup>. (For increased loadbearing seals and larger spans, PROMASEAL® Fire Compound Extra Strength must be used - Always consult Promat Technical Services for specific advice for each seal).

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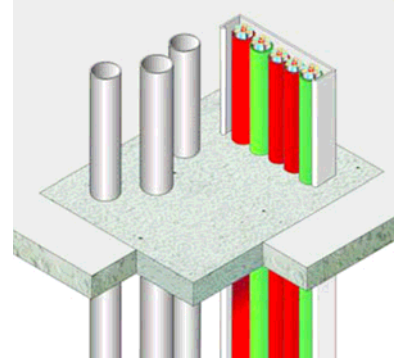


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### Mixing Procedure:

PROMASEAL® Fire Compound is a white powder mortar, which when mixed with water can produce a pourable or trowelable compound for sealing openings in concrete floors, concrete and masonry walls. The powder should always be added to water to ensure complete wetting. As a guide, in wall applications where a stiffer mix is required, it is suggested that a mixing ratio of 2 parts PROMASEAL® Fire Compound to 1 part water (by volume) be used. Where a pouring grade is required it is suggested that the ratio should be 3 parts PROMASEAL® Fire Compound to 2 parts water (by volume).



### Trowelable Grade: 2:1 (approx.)

60 minutes seal (50mm) = 51kg dry mortar/m<sup>2</sup>  
120 minutes seal (75mm) = 75kg dry mortar/m<sup>2</sup>  
240 minutes seal (100mm) = 100kg dry mortar/m<sup>2</sup>

### Pourable Grade: 3:2 (approx.)

60 minutes seal (50mm) = 48kg dry mortar/m<sup>2</sup>  
120 minutes seal (75mm) = 71kg dry mortar/m<sup>2</sup>  
240 minutes seal (100mm) = 95kg dry mortar/m<sup>2</sup>

### Installation Procedure:

#### Tools and equipment required for the installation of non-loadbearing compound.

Dust pan and brush  
Plastic sheeting  
Tape measure  
Litre measure  
Mixing container  
Power assisted stirrer

Ensure that all service penetrations are installed as required (PROMASEAL® Fire Compound can be drilled and reworked after installation to allow extra penetrations to be added).

Using dustpan and brush, sweep away all loose debris from the inner surface of the hole and surrounding area. Remove all combustible materials from the opening. Place plastic sheeting (or appropriate material to suit site requirements / conditions) beneath the working area to catch any falling material.

Remove any insulation or lagging from around penetrating services within the opening to ensure a good seal between the services and the PROMASEAL® Fire Compound.

Depending on the fire rating required, fix suitable shuttering (timber, mineral fibre, expanded metal or polystyrene) so that the required seal thickness can be achieved.

All combustible shuttering products must be removed when the PROMASEAL® Fire Compound has cured. For wall installations it may be necessary to install shuttering from both sides of the opening and fill through a hole at the top of the shuttering. Alternatively wall seals can be progressively built-up by using a stiff mix of PROMASEAL® Fire Compound using 'snow balls' of compound and a single shuttering to avoid slumping. The faces of the seal can be smoothed with a finishing trowel-grade mix of mortar.

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### Installation Procedures Continued:

Once the floor opening is prepared for installation, shuttering should be installed to prevent any spillage of the PROMASEAL® Fire Compound, ensuring a tight fit is achieved around any penetrating services and around the perimeter edges of the opening. Consideration should be given to any potential movement of the services, for minor amounts of movement PROMASEAL® Silicone Sealant should be used to point around services.

PROMASEAL® UniCollars and PROMASEAL® Pipe Wraps may be incorporated where penetrations include plastic pipes. Contact Promat Technical Services for specific advice.

For floor seals that require reinforcement, the re-bars should be minimum 12mm diameter at maximum 150mm centres. The re-bars should be positioned at mid-thickness and supported at their ends on steel angles.

For precise specifications please contact the Promat Technical Services Department.

Slowly add the PROMASEAL® Fire Compound powder to the required quantity of clean tap water and mix using a clean power assisted stirrer. Pour approximately 15mm depth of PROMASEAL® Fire Compound into the shuttered floor opening, covering the shuttering completely and closing any voids around services and the perimeter of the shuttering. Allow the first pour to cure for approximately 30 minutes, the opening can then be filled to the required depth to achieve the required fire rating. The PROMASEAL® Fire Compound must be poured to the required depth in one operation. Built-up layers will result in a weak laminar structure.

The surface of the PROMASEAL® Fire Compound can then be smoothed using a float if required. Ensure that warning notices, protective coverings and/ or any other safety systems are in place to prevent personal injury or damage during the curing period of the PROMASEAL® Fire Compound. When shuttering is removed, fill any gaps using a trowelable grade of PROMASEAL® Fire Compound to complete the installation.

Apply a label to the finished seal, detailing the date of installation, fire rating and the type of seal i.e. Non load-bearing or maximum 1.5kN/m<sup>2</sup> temporary foot traffic loadbearing seal.

### External Application:

Where PROMASEAL® Fire Compound is used externally, a protective coating of Thompsons Water Seal ULTRA should be applied. The coating manufacturers recommendations should be followed at all times.

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