

Promat PROMASEAL® Fire Compound Extra Strength

Assessment
No: BRE LPC
CC 237371
PUKL

General description

Promat PROMASEAL® Fire Compound Extra Strength is a blend of high quality gypsum cement, fire resisting aggregates and additives, giving a compound with excellent fire resistance, combined with high strength, versatile workability and excellent acoustic insulation. Acoustic data is available on this product, please contact the Technical Services department.

Promat PROMASEAL® Fire Compound Extra Strength is easily mixed with water to consistencies ranging from pourable, to stiff and trowel-able, with controlled expansion on setting, giving a gas tight seal within the opening and around services.

Application

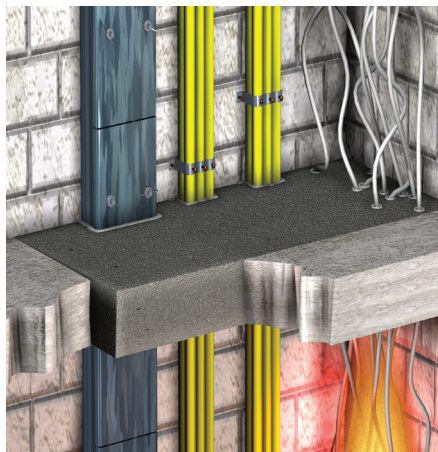
Loadbearing Floor Seals

In a concrete floor slab opening, the unique combination of structural properties of the Promat PROMASEAL® Fire Compound Extra Strength seal enables it to support a load of several tonnes, even across quite large spans, without reinforcement. Please note that Promat PROMASEAL® Fire Compound Extra Strength is intended to support temporary loading e.g. foot traffic and not permanent loading.

Structural Seals around Fire Dampers

When installed around fire damper units the excellent crushing strength and shear resistance of Promat PROMASEAL® Fire Compound Extra Strength ensures that the installation frame will be retained in the wall or floor, if the ductwork should collapse, even when the damper frame is not tied back to the structure.

Use of the compound around fire dampers should be approved by the damper unit manufacturer.



Typical Properties

Colour:	Light Grey
Density loose bulk:	950Kg/m ³
Density wet cast:	1750 - 1900Kg/m ³
Density oven dry:	1450 - 1600Kg/m ³
Setting time:	Approx 1 hour
Expansion on setting:	0.1%

Flexural Strength $F_{rupture}$ at 28 days

Compound: Water ratio 2.5:1	5.2N/mm ²
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Compressive Strength at 28 days

Compound: Water ratio 2.5:1 - pourable	14.0 N/mm ²
Compound: Water ratio 3.0:1 - stiff	21.0 N/mm ²

* Compound: water ratio by volume

Fire Performance

		Depth of seal (mm)	Integrity (mins)	Insulation (mins)
Cables & Pipework	Through floors (EN 1366-3)	100	240	231
Ductwork Dampers	Through floors (BS 476 Part:20)	90	240	225
	Through walls (BS 476 Part:20)	82	240	164

Loadbearing Capacity at 48 hours

	Span of Seal (mm)	Span/Depth Ratio (100mm deep floor seal)	Tensile Failure Pressure (kN/m ²) (one way spanning)	Safe Working Load (kN/m ²)*
Un-reinforced floor seal, mix ratio 2.5:1	900	9:1	30	10
	1200	12:1	25	8
	1500	15:1	15	5

*Safe working load of the floor seal is taken as one third of the tensile failure pressure.
Safe working load is for temporary foot traffic not permanent loading.

Mixing Procedure

Mix with clean water in a plastic container. Slowly add the dry powder to water while stirring by hand or power mixer to ensure a smooth lump-free mix.

Recommended Mixes

Compound	Water (by volume)
Floor openings	2.5:1
Wall openings	3.0:1

Do not attempt to remix by adding more water after the compound has started to set.

Using dirty mixing buckets can accelerate setting and result in a weak compound.

Note: The wet mix will remain usable for approximately 45-60 minutes depending on batch size, water content and temperature. Any spillage should be wiped up with a damp cloth before setting occurs.

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. Combustible materials i.e. timber shuttering must be removed, after the mix has set.

For complex penetrations it may be preferable to initially form a thin seal around all the services, with a nominal 5mm layer of the compound mix. Once this has set, the remaining depth of seal should be poured in one operation.

Building up the seal in several operations with the individual layers being allowed to set, will result in a weak laminated structure with severely reduced load bearing performance.

Yield

Approximately 7 x 20kg bags per m² at 100mm thickness.

Health and Safety

Contains gypsum plaster and natural aggregates. Wear appropriate protective clothing, including gloves, dust mask, safety glasses, especially during mixing, to guard against dust inhalation, eye damage and skin irritation. Safety data sheets are available from the Technical Services department.

PACKAGING

20kg bags.

STORAGE

Must be stored in dry conditions. Shelf life, in unopened bag, at least 6 months.

TECHNICAL SERVICES

For additional technical support, please contact the Technical Services department.

Technical Services

For technical support and advice
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