

Technical data sheet

Seals Mortar G

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GENERAL PRODUCT DESCRIPTION

Seals Mortar G is a dry white powder consisting of inorganic compounds and perlite.

When mixed with water, the compounds form a highly thermally insulating fire sealing compound to prevent the spread of fire and smoke through openings in fire rated walls and floors, including openings formed around building service penetrations.

Seals Mortar G will also maintain the acoustic design performance in walls and floors.

Seals Mortar G expands approx. 1% by hydraulic action during curing ensuring a very tight seal around the service penetrations and the surrounding opening apertures.

Seals Mortar G is easy to sand or drill. The compound dries to an off-white colour which may be painted.

PROPERTIES

- Classified in walls and floors of concrete, brick, gypsum etc.
- Suitable for cables, bundled cables, cable racks, cable trays, steel, copper, alupex and plastic pipes and air ventilation ducts.
- Simple to apply leaving a very smooth finish.
- High degree of mechanical resistance; the seal is load bearing without reinforcement.
- No priming necessary prior to application in most building material substrates however metal services in contact with the seal must be corrosion protected.
- Suitable for most surfaces, included concrete, bricks, Leca, steel, plastic etc, but not suitable to filling of doors or in service openings that involve movement.
- The product is certified for use in gypsum walls but it is recommended to use Seals DCR Boards for these applicallions.
- Fully set within 1 hour.
- The fire performance specification of the compound has been derived when the seal has been leti to cure for 1 month.
- Nearly unlimited storage time.

RESISTANCE TO FIRE

Construction	Description	Classification
Flexible walls comprise gypsum, masonry, aerated concrete or concrete	Up to 2400 mm wide by 1200 mm high blank seal with med double sided 25mm Seals Mortar G on 25mm cast board	EI 120 (E 120)
Rigid walls comprise masonry, aerated concrete or concrete	Up to 2400 mm wide by 1200 mm high blank seal with single sided 50mm Seals Mortar G on 50mm cast board Up to 2400 mm wide by 1200 mm high blank seal with single sided 100mm Seals Mortar G	EI 180 (E 180) EI 240 (E 240)
Rigid floors comprise aerated concrete, concrete or hollow concrete floor slabs	Up to 2400 mm by 1200 mm blank seal with 50mm Seals Mortar G on top of 50mm cast board Up to 2400 mm by 1200 mm blank seal casted with 100mm Seals® EX Mortar	EI 180 (E 180) EI 180 (E 180)
The cast board comprise stone wool with density $\geq 150\text{kg/m}^3$.		
NB. Please see the product's Installation Instructions for full details		

SOUND INSULATION

Description	Sound reduction
Single sided cast ≥ 50 mm on stone wool board	64 dB
Single sided cast ≥ 100 mm without board	64 dB
Double sided cast ≥ 25 mm on stone wool board	64 dB
Double sided cast ≥ 50 mm without board	64 dB
Seals Mortar G has been tested at BM Trada (UKAS accredited); according to EN ISO 10140-2:2010.	

LOADBEARING PROPERTIES (FLOORS)

Seals Mortar G has been subject to concentrated load and impact tests in floors according to ETAG 026-2 and EOTA TR001 Clause 2.

The tests were conducted on the minimum allowed cast depth of **100mm**.

According to the loading limits in the table below, reinforcement is not necessary, however it is highly recommended that the edges of the aperture are brushed free of any dust or loose particles and that any contamination is washed away using clean water. Moistening the edges well before casting will improve adhesion.

Seals Mortar G should not be cast in surface treated concrete. The mortar must be mixed to a thick but fluid mass at a rate of approx. 2 parts of powder to 1 part water. Maximum loadbearing performance will be achieved 28 days after casting.

Test Results

Test in 1.500 x 1.000mm frame	
Soft body impact, serviceability	500Nm
Soft body impact, safety in use	700Nm
Hard body impact, serviceability	6 Nm
Hard body impact, safety in use	10 Nm
Concentrated load to ETAG 26-2	15 Nm

EMISSION DATA (INDOOR AIR QUALITY)

Compound	Emission rate after 3 days	Emission rate after 4 weeks
TVOC	12 µg/m ³	< 5 µg/m ³
TSVOC		< 5 µg/m ³
VOC w/o NIK		< 5 µg/m ³
R Value		
Formaldehyde	7.1 µg/m ³	
Acetaldehyde	< 3 µg/m ³	
Sum for+ace	< 0.006 ppm	
Carcinogenic	< 1 µg/m ³	< 1 µg/m ³
n.d. or < means not detected		
Seals Mortar G complies with the requirements of GEV and the results correspond to the EMICODE emission class EC 1^{PLUS} which is the best possible environmental and indoor hygiene health protection mark. Tested by Eurofins Product Testing, report number G12874B.		

CURING TIME

Application	Temperature	Cure time
For filler 3.5 to 1 mix	0 °C	19 minuten
	10 °C	18 minuten
	20 °C	17 minuten
	30 °C	16 minuten
	40 °C	15 minuten
For casting 2 to 1 mix	0 °C	40 minuten
	10 °C	35 minuten
	20 °C	30 minuten
	30 °C	25 minuten
	40 °C	20 minuten

Seals Mortar G was mixed with an electric mixer for 90 seconds at 750 rpm with a 100mm diameter paddle. Note the greater the sheer/agitation generated in the mixing process the quicker the mortar will set.

Seals Mortar G is designed to be a quick curing system for professional installers where fast application times is of the highest importance. For slower cure, a retardant can be added to the dry mortar powder (sold separately).

TECHNICAL DATA

Condition	Powder ready for mixing with water
Product consumption	Approx. 2.94 bags per m ² @ 50mm depth Approx. 5.88 bags per m ² @ 100mm depth
Dry density	About 900 kg/m ³ after full cure
Flash point	Class A1 according to EN 13501-1
Hardened	Less than 1 hour depending on the local climate
Totally hardened	Up to 30 days depending on thickness and temp
Flexibility	none
Thermal conduct	0.051 W/mK
Storage	No particular limit for unopened bags in dry places with storage temperatures between 5°C and 30°C
Compatibility	Suitable for use with most materials, but should not be used in direct contact with metals that may corrode
Limitations	Should not be used in permanently damp areas or in moving joints.
Colour	Off-white
Packaging	Bags of 20 litres Pails of 10 litres Bags: 63 on the pallet, equals approx. 800 kg Pails: 72 on the pallet, equals approx. 500 kg