

FernoMortar®

Fire-resistant fast-setting mortar

TDS FernoMortar 2305EN

Bloem FernoMortar is a fire-resistant, fast-setting mortar, composed of inorganic compounds and perlite. FernoMortar is used to restore the fire resistance of walls and floors. The dry mortar, which can be mixed with clean water, forms a strong thermal and insulating mass after hardening, which protects compartments for up to 240 minutes.



Properties

- Prevents fire damage for up to 240 minutes (EI240)
- FernoMortar is a non-combustible product
- Classified for use on floors and walls made of concrete, plaster, brick, etc.
- For openings in floors and walls up to 2400x1200 mm
- No primer required for most building materials; metal parts should be protected against corrosion
- Does not damage cables and pipes
- Easy to use
- Fully cured within 1 hour
- Provides a smooth surface finish.

Applications

- Flexible walls
- Rigid walls and floors
- Metal pipes up to Ø 324mm with insulation
- Plastic pipes up to Ø 400mm
- Cables, cable bundles, cable trays, cable ducts, steel, copper, Alupex and plastic pipes, ventilation ducts, etc.

Testing / Certificates

- Tested according to NEN 6069 and EU Standard EN 1366-3, ETA 22/0705
- CE Certificate No. 2531-CPR-CXO10397
- Emicode EC1-Plus, VOC A+ Regulation, BREEAM, BlueAngel, LEED v4.

Technical data

Description:	Mortar
Classification:	Up to E240, EI240*
Reaction to fire	A1, non-flammable
Service temperature:	-30°C to +80°C
Flexibility:	none
Application temperature:	+5°C to +50°C
Curing temperature:	0°C to +50°C
Hardening time:	less than 1 hour**
Fully hardened:	up to 30 days**
Product consumption:	@50mm depth approx. 3 to 4 bags / m ² @100mm depth approx. 6 to 8 bags / m ²
Service life:	30 years

* For achieved fire resistance per application, see test report (ETA 22/0705)

** Drying time and curing depend on temperature and layer thickness.

Application	Curing time
For casting 2 to 1 mix	17 minutes at 20°C
For filler 3,5 to 1 mix	30 minutes at 20°C

* Drying time and curing depend on temperature and layer thickness.

Packaging

Bags of 20 litres, 63 bags per pallet.

Colour

Off white, can be painted after hardening.

Storage and shelf life

Store in a cool and dry place between +5°C and +30°C. Shelf life is of at least 12 months in original unopened packaging.

Transportation classification

Not applicable; no special measures are required.



Processing

- Cover the underlying floors first.
- Remove combustible parts, debris, and dust from the opening.
- For plastic pipes passing through the opening, a Fernowrap wrap sleeve must be applied on-site where Fernomortar will be applied.
- Moisten concrete, masonry, and other porous surfaces in the opening.
- Mix enough mortar for the required layer thickness until a homogeneous, lump-free mass is achieved. Use a suitable mixer, clean water, and an empty container or bucket.
- Depending on the application, the mixed Fernomortar can be poured or applied with a trowel. Apply pressure when used vertically.
- Mixing ratio for pouring: 2 parts mortar: 1 part water. Mixing ratio for trowelling: 3.5 parts mortar: 1 part water.
- Holes and repairs can be filled with newly mixed mortar.

Supporting constructions

- Flexible walls must have a minimum thickness of 100 mm and comprise steel studs or timber studs* lined on both faces with minimum 2 layers of 12.5 mm thick boards.
- Rigid walls must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.
- Rigid floors must have a minimum thickness of 100 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m³.
- The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

*no part of the penetration seal may be closer than 100 mm to a stud, the cavity must be closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

Limitations

Fernomortar should not be used in permanently damp areas or in moving joints. Fernomortar should be protected against frost when not fully hardened.

Pipe end configuration

Different intended uses of pipes can lead to the need for different requirements for the pipe end configuration within a test. During a fire the conditions of the pipe and sealing system which are exposed, depend on whether both or either ends of the pipe are sealed in practice. Within the EN 1366-3 Test standard can be chosen not to cover (or close) the pipe, or to cover the pipe in the furnace, or outside the furnace, or on one or both sides.

For instance EI 60 U/C means the pipe was uncapped inside the furnace, and capped outside the furnace. The pipe end configuration / pipe system relations listed below may be used as a rule of thumb.

Intended use of pipe		Test Condition ⁴⁾
Drainage or sewage pipe, plastic	Ventilated drain	U/U ¹⁾
	Unventilated drain	U/C ¹⁾
	Drain w/water trap	U/C ¹⁾
	Not at drainage	C/C ²⁾
Rainwater Pipe, Plastic	At drainage	U/U ¹⁾
	Not at Drainage	C/C ²⁾
Pipe in closed circuit (water, gas, air, electricity etc.)		C/C ²⁾ ³⁾
Flue gas recovery system pipe, plastic		U/C ¹⁾
Pipe with open ends and ≥ 50cm length on both sides, plastic		U/U ²⁾
Pipe supported by suspension system, metal	Fire rated support	C/U ¹⁾
	Non-fire rated	U/C ¹⁾
Waste disposal shaft pipe, metal		U/C ¹⁾

¹⁾ Stated in NEN EN 1366-3.

²⁾ Bloem Sealants judgment based on tests.

³⁾ Metal pipes should have fire rated support.

⁴⁾ U/U classified fire seals cover C/U, U/C and C/C. C/U classified fire seals cover U/C and C/C. U/C classified fire seals cover C/C.

