

## MP 75 Fire

### Fire Protection Gypsum Plaster

Technical Data Sheet

05/2024



### Material

MP 75 L Fire consists of gypsum as a binder in combination with a special mix of lightweight aggregates, additives and fibres to ensure good machine application.

#### Storage

Store the bags frost-free on wooden pallets in a dry environment. Can be stored for approx. 6 months. Seal damaged and opened bags airtight and use them first.

#### Quality assurance

In compliance with ETA-21/0727, the product is subject to initial type testing and continuous factory production control and bears the CE marking.

### Application

MP 75L Fire has been developed specially for passive fire protection in interiors. It is designed to protect the load bearing capacity of the coated structural elements in the event of a fire for the duration of the fire resistance stipulated by the building supervision authorities for:

- Concrete slabs and walls
- Concrete columns and beams
- Steel columns and beams

### Features and benefits

- Fire resistance
  - for concrete ceilings and walls up to REI 180
  - for concrete supports and beams up to R 180
  - for steel beams and columns up to R 120
- Can be applied by machine
- Particularly high yield
- Gypsum based
- Fibre reinforced
- For interiors
- Colour white

Substrate	Pretreatment
Untreated steel	Inspect for rust and remove if required. Steel profiles must then be treated in accordance with the manufacturers instructions with a corrosion-proof coating based on alkyd resin, epoxy resin, polyurethane, zinc-dust epoxy resin or zinc-dust silicate.
Steel with an existing coating	Firmly adhering coatings on the basis of alkyd resin, epoxy resin, polyurethane, zinc-dust epoxy resin or zinc-dust silicate are suitable substrates for MP 75 Fire. Remove other old coatings.
Uncoated concrete	Remove film-forming concrete release agent as well as any existing sinter skin and other impurities by suitable means. Also refer to brochure P10.de Knauf Plaster Competence (Section: Substrate examination).
Concrete with an existing coating	Remove the old coatings.

**Substrate**

Check the substrate for compliance with VOB part C, DIN 18350, chapter 3.1 and/or according to VOB part B, DIN 1961 paragraph 4 section 3. All substrates must be stable, dry, even and free of grease and dust as well as free of any residual substances that may reduce the adhesion. Pretreat the substrate in accordance with the table above. Cover easily-soiled building components before commencement in accordance with Code of Practice "Abklebe- und Abdeckerarbeiten für Maler- und Stuckateurarbeiten" (German only) issued by the German Bundesverband Ausbau und Fassade.

**Machines / equipment**

Knauf PFT mixing pump G 4

- Stator: D4-3 or D6-3
- Rotor: D4-3 or D6-3
- Mortar hoses: 25 mm
- Spray nozzle: 10 or 12 mm
- Wet mortar pumping distance: 25 m
- Mixing screw: Alternative: G 4 / G 5
- Insulation plaster mixing screw: G 4 / G 5

For intricate components and/or a finer spray pattern, a spray gun as well as a stator with a reduced delivery output (l/min) can be used.

- Stator: D3-4 or D3-5

**Application**

The required application consistence is set by gauging the water feed accordingly (approx. 1.3 to 1.5 bar/metre of mortar hose). The delivered spray pattern is influenced by adjusting the air nozzle. The mortar is then applied evenly at a distance of approx. 30 cm from the substrate in a single layer up to the specified thickness so that an even, grainy surface is achieved. In the event of layer thicknesses > 20 mm, 2 layers can be applied fresh-on-fresh with a waiting time of approx. 30 minutes. Check the application thickness regularly during application. No further layer can be applied once set. Depending on the temperature, breaks in spraying not exceeding 10 to 15 minutes are possible. Clean the machine and hoses with longer breaks / interruptions in application.

**Plaster thickness**

The necessary minimum application layer thickness is a factor that is dependent on the fire resistance requirements (see Technical Brochure P914\_TB Fire Protection Gypsum Plaster MP 75 Fire Planning Guide)

Layer thickness steel: minimum 10 mm to approx. 43 mm

Layer thickness concrete: minimum 11 mm to approx. 22 mm

**Application temperature / climatic conditions**

Do not apply with room and/or component temperatures under +5 °C or exceeding +40 °C. Protect freshly applied plaster against direct sunlight, frost, rain and wind until it has fully dried.

**Application time**

Up to about 180 to 300 minutes depending on the substrate.

**Drying**

Provide good ventilation to ensure quick drying of the plaster. If mastic asphalt screed is applied after plastering, sufficient transverse ventilation is required to avoid thermal stresses. Drying time at 10 mm plaster thickness is an average of 7 days depending on the humidity, temperature and ventilation of the room. The drying time will be extended with unsuitable temperatures / air humidity.

**Surface**

The MP 75 Fire finished surface is a rough spray finish. If necessary, the concrete surfaces can be levelled and smoothed after spreading, setting and drying with subsequent smoothing/pore sealing using Multi-Finish. The additional coatings may not be attributed to the effective fire protection layer thickness of the MP 75 Fire.

**Note**

The layer thicknesses specified in the Technical Brochure P914\_TB Fire Protection Gypsum Plaster MP 75 Fire Planning Guide are minimum thicknesses that must be observed. It is not permissible to apply a second layer after the plaster has hardened. For this reason, we recommend application of a layer thickness that is always 10 to 20 % more than the minimum to avoid the risk of layer thicknesses that are too thin.

MP 75 Fire is not suitable for structurally effective concrete renovations.

## Technical data

Description	Standard	Unit	MP 75 Fire
Reaction to fire	EN 13501-1	Class	A1
Compressive strength	EN 13279-2	N/mm <sup>2</sup>	≥ 2.3
Tensile bond strength	EN 1015-2		
On concrete		N/mm <sup>2</sup>	≥ 0.2
On steel		N/mm <sup>2</sup>	≥ 0.15
Water vapour diffusion resistance	EN 12086	-	7
pH value	-	-	12 – 13
Initial setting time	-	min	approx. 90 – 170
Final setting time	-	min	approx. 180 – 300
Bulk density	-	kg/m <sup>3</sup>	500 – 600
Dry density	EN 1015-10	kg/m <sup>3</sup>	approx. 750
Bending tensile strength	EN 13279-2	N/mm <sup>2</sup>	1.0
Thermal conductivity λ <sub>10</sub> , dry	EN 1745	W/m·K	0.20
Wet mortar weight		kg/mm/m <sup>2</sup>	approx. 1.3
Dry plaster weight		kg/mm/m <sup>2</sup>	approx. 0.8

The stated technical data were evaluated acc. to the respective test standards. Deviations under site conditions are possible.

## Material requirement and efficiency

Application	Consumption approx. kg/m <sup>2</sup>	Yield approx. m <sup>2</sup> /bag	m <sup>2</sup> /t
10 mm application thickness	6.2	3.2	161.0

All stated figures are approximate values and may deviate depending on the substrate conditions. The exact consumption can only be determined on the individual object.

## Delivery programme

Title	Packaging	Packaging box / pallet	Art. Nr.	EAN code
MP 75 Fire	20 kg / bag	25 bags / pallet	00818460	4003982564511

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