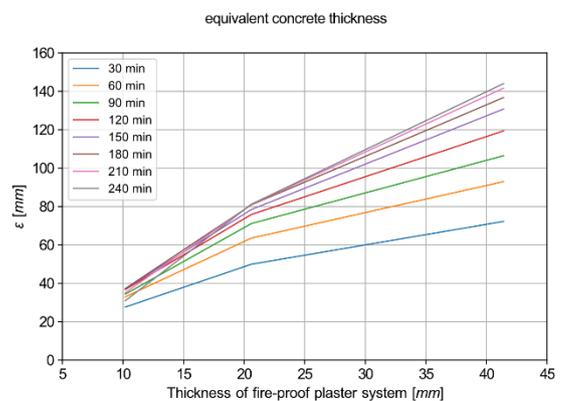


MIG DHMb® Lining System

Exterior and Interior Application

MIG-HRP Heat Resistant Protector

- ✓ ETA approval: ETA-20/0745 of May 18, 2021
- ✓ formulated according to DIN 4102-4 for walls and ceilings, steel beams etc.
- ✓ can be applied in one or two layers
- ✓ surface can be felted
- ✓ cement-lime perlite plaster
- ✓ excellent adhesion
- ✓ non-flammable - building material class A1



Product Description

MIG-HRP Heat Resistant Protector is a mineral and heat-insulating fire protection plaster and a non-flammable ready-mix dry mortar formulated according to DIN 4102 Part 4, Section 5.1.4. (5) (Fire Behaviour of Building Materials and Components). It is made of cement and hydrated lime, perlite 0 - 3 mm.

MIG-HRP Heat Resistant Protector is a plaster of mortar group P II according to DIN 18550 and strength class CS II according to DIN EN 998-1.

Technical consulting service

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Product Features

MIG-HRP Heat Resistant Protector is a smooth, easy-to-process, structurable fire protection plaster. It is characterised by its high heat resistance.

MIG-HRP Heat Resistant Protector is non-flammable and can be coated with mineral plasters and mineral paints.

5 mm **MIG-HRP Heat Resistant Protector** is equivalent to 10 mm normal concrete in terms of fire protection!

Application Area

For fire protection upgrade of concrete structures, steel girders and steel supports in connection with plaster girders (e.g. wire mesh, brickwork, ribbed expanded metal) of building material class A and building material class B (wood wool, lightweight panels) for walls and ceilings.

Building Site Requirement

The plaster base must comply with the relevant standards and the manufacturer's processing guidelines. Do not process at air and/or object temperatures below + 5°C or above + 35°C or in case of expected night frosts.

Substrate Preparation

The substrate must be clean, dry, solid and free from loose parts. Always remove release agents. Dry old plaster thoroughly or clean it using a high-pressure cleaner. The residual moisture in the concrete must not exceed 3%.

The prerequisite for achieving fire protection effectiveness is sufficient adhesion to the plaster base in accordance with DIN V18550, e.g., using a non-flammable plaster base. The plaster base must be adequately anchored to the building component to be protected, e.g., by screwing or welding, with the aid of spaced-apart steel rails if necessary. The span width of the plaster base must be 500 mm. Joints between plaster bases should have an overlapping width of approximately 10 cm, and the individual plaster base strips must be tied up with wire. The plaster must penetrate the plaster base by 10 mm. The plaster base must be examined and prepared according to DIN 18550, DIN 18350, or DIN 4102. In outdoor areas, floor slabs and walls in contact with the ground must be sealed according to the water exposure class.

Processing

Apply the desired plaster thickness (min. 15 mm, max. 50 mm) as a base coat (single-layer application), pull tight, align (cut flat).

When applying two plaster layers, the first layer must be well roughened and completely dried out (white dry) before applying the second layer.

If work is interrupted for more than 20 minutes, the machine and hoses should be emptied and cleaned. Reinforcement should be used on all plaster bases with a tendency to change shape, e.g. at the corners of all openings or at the connection points of different materials.

After-treatment / Coating

After-treatment:

After completion of the plastering work, the rooms must be ventilated regularly and briefly (impact ventilation: airing out with windows wide open) to ensure good strength development and substrate adhesion.

High humidity and substrate moisture interfere with the strength development of plasters. Protect the plaster against subsequent moisture penetration (proper impact ventilation after screed installation!).

Plaster that has not yet dried out must be protected from excessively high temperatures (e.g. artificial heating) and frost by taking suitable measures.

For surfaces to be tiled, the plaster should not be felted, but only levelled.

Coating:

Paints and coatings may only be applied after the plaster is completely dry.

Silo and machine technology:

Can be processed with all common plastering machines, mixing pumps e.g. m 3, Duo mix, G 4, S 48 and by hand. A wet delivery hose NW 35 must be used for machine processing.

Special Information

The fire resistance duration and the fire resistance class of a building component essentially depend on the following influences:

- Fire exposure, single or multiple-sided
- the building material or composite used
- component dimensions, cross-section dimensions, slenderness, centre distances, etc.
- structural design, connections, supports, brackets, fastenings, joints, fasteners, etc.
- static system (static definite or indefinite bearing, 1-axis or 2-axis load transfer, restraints, etc.)
- degree of utilisation of the strengths of the building materials used as a result of external loads and arrangement of cladding (sheathing, plasters, suspended ceilings, facing shells, etc.)

Table 5.1 line 3 of DIN 4102 - Part 4 regulates the plaster thickness of the **MIG-HRP Heat Resistant Protector** required as a replacement for the necessary centre distance "u". The distance between the longitudinal axis of the load-bearing reinforcement bars and the flame-exposed concrete surface within a reinforced concrete component is referred to as the centre distance "u". The thickness of the plaster above the plaster base is limited to a maximum of 30 mm.

General Information

In case of doubt regarding processing and/or object specifics, ask for advice.

Do not add any foreign substances.

The standard plaster thicknesses must be observed as a minimum. In particular, the provisions of DIN 18550, DIN 4102 Part 4, DIN 18350 VOB Part C, DIN EN 13279-1 and the leaflet "Plastering in winter" must be observed.

Mortar has a strongly alkaline reaction with water, therefore: protect skin and eyes, rinse thoroughly with water in case of contact, seek medical advice immediately in case of eye contact.

Observe the safety data sheet (current SDS at: www.mig-mbh.de).

Physiologically and ecologically safe when set.

Measurement of layer thickness based on concrete equivalence according to DIN EN 13381-3

Concrete Equivalence (mm) corresponding to fire exposure duration (Min.):

Plaster thickness MIG-HRP Fire protection plaster	30 Min.	60 Min.	90 Min.	120 Min.
10 mm	28	33	34	37
20 mm	50	64	71	76
30 mm	60	77	87	97
40 mm	70	93	106	119

(Excerpt from test report GS 6.1/18-065-1 MFPA Leipzig - Refer to the above graphical representation for details)

Measurement of layer thickness for steel profiles (columns and beams) according to DIN EN 13381-4

Plaster thickness based on the cross-sectional ratio U/A and a design temperature of 500 °C:

U/A [1/m]	30 Min	90 Min.
< 75	10 mm	20 mm
< 120	10 mm	25 mm
< 300	10 mm	30 mm

(Summary from test report GS 6.1/18-090.1 values rounded to 5 mm)

Technical Data

Application	exterior and interior
ETA approval	ETA approval: ETA-20/0745 of May 18, 2021
Fire behaviour	A1 (non-flammable), according to DIN 4102, EN 13501, EN 13813
Compressive strength after 28 days	approx. 3.5 N/mm ²
Compressive strength class	P II according to DIN 18550, CS II according to DIN EN 998-1
Yield	approx. 2,200 L/t 0.50 kg/m ² /mm
Plaster thickness	according to DIN 4102 Part 4, table 2
Adhesive tensile strength, min.	≥ 0.08 N/mm ²
Dry bulk density	approx. 0.40 kg/dm ³
Processing temperature (air)	Do not process at air and/or object temperatures below + 5°C and above + 35°C and in case of expected night frosts
Water adsorption	W0
Water demand	approx. 12.5 L per 15 kg bag
Water vapour permeability	6 μ
Heat conductivity	$\lambda_{10, \text{dry, mat}} < 0.09 \text{ W}/(\text{m} \cdot \text{K})$
Note	values in the technical data are laboratory values

Consumption

Layer thickness	mm	10	15	20	25
Consumption	kg/m ²	4.8	7.2	9.5	12.0
Spread rate	m ² /t	210	140	105	84
	m ² /15 kg/bag	3.0	2.0	1.5	1.2

(The values refer to flat substrate)

Storage

At least 3 months shelf life from date of sale if stored dry, frost-free and cool under proper conditions in original sealed containers.

Disposal

Do not dispose together with household waste. Do not empty into sewerage system.

Recommendation:

Empty bags completely, disposal in accordance with official regulations.

Packaging

15 kg (per paper bag) x 40 bags (per pallet) = 600 kg
Bulk by silo truck

Customs Tariff Number

32149000

MIG DHMb® Lining System – Products

Coatings

MIG-ESP® Interior
MIG-ESP® Exterior
MIG-ESP® Interior Anti-Microbial
MIG-ESP® Rooflect

Plasters

MIG 262
MIG Therm M 65
MIG Therm M 55
MIG Thermalife® Ecoplaster
MIG-HRP Heat Resistant Protector
MIG-HRP 280 Bonding Agent
MIG Therm L 14

Primers

MIG-ESP® Sealing Primer
MIG-ESP® Special Primer
MIG-ESP® Primer quartz-filled
MIG-ESP® PVC Primer
MIG-ESP® Primer for Wood (for indoor use only)
MIG-ESP® Bitumen Primer

Sealing

MIG Sealer

Impregnation

MIG Impreg. Agent for Natural Stone Facades

Legal Information

The information in this publication is based on our current technical knowledge and experience. Due to the abundance of possible influences during the processing and application of our products, they do not release the user from carrying out his own tests and trials and are only general guidelines. A legally binding assurance of certain properties or suitability for a specific purpose cannot be derived from this. Any industrial property rights as well as existing laws and regulations must always be observed by the user on his own responsibility.

With the publication of this data sheet, all previous data sheets lose their validity.