MIG DHMb® Lining System

Exterior and Interior Application

MIG Therm M 55

- ✓ Purely mineral composition
- ✓ Disposal as construction waste
- ✓ Excellent thermal insulation properties
- ✓ High thermal mass
- ✓ Available in bulk from silo
- ✓ High yield
- ✓ Non-combustible - Building material class A1
- ✓ Seamless and void-free insulation

Product Description

MIG Therm M 55 is a thermally insulating fire protection and lightweight system plaster formulated with cement, fractionated sands, microspheres and special additives to improve workability.
MIG Therm M 55 is classified as a factory dry mortar T, CS II, WC 1 according to DIN EN 998-1.
MIG Therm M 55 is a highly workable system insulating plaster with a thermal conductivity of 0.055 W/(m*K).
MIG Therm M 55 can be applied without a base coat in thicknesses ranging from 20 to 100 mm, boasting a high yield of 2,600 l/t dry material.

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Application Area

As lightweight, extremely low-stress thermal insulation plaster suitable for all common, load-bearing substrates. The system consists of a bonding agent, insulation plaster, reinforcement layer and finishing coat.

It can be used as additional insulation for thermally insulating masonry, such as lightweight hollow bricks, lightweight concrete, or aerated concrete. Equally applicable in existing buildings, where it can be used on all load-bearing and plasterable substrates. Seamless insulation layers can be created, adapting to all geometric shapes of the substrate.

MIG Therm M 55 can also be used as interior insulation to improve the thermal insulation of exterior walls and increase surface temperature. When used as interior insulation, a functional proof must be provided by a building physicist using specialized calculation software such as WUFI or similar, especially for higher application thicknesses and low wall cross-sections/visible timber frames.

Due to its low modulus of elasticity, high decoupling from the plaster base is achieved, significantly increasing resistance to plaster cracks caused by the substrate. The system is also suitable for levelling large irregularities.

MIG Therm M 55 is not suitable for foundations. Instead, **MIG Therm L 14** plinth plaster is recommended.

Application thicknesses of **MIG Therm M 55**: 10 - 100 mm
For plaster thicknesses exceeding 100 - 150 mm, a plaster carrier (e.g., Welnet) must be anchored to the masonry, or anchoring through reinforcement mesh may be necessary according to static specifications.

Building Site Requirement

The plaster base must comply with the relevant standards and the manufacturer's processing guidelines. Avoid applying at air and/or object temperatures below + 5°C or above + 35°C, and also refrain from application when overnight frosts are expected.

Substrate Preparation

The substrate must be clean, dry, firm and free of loose parts. Remove any release agents. Old plaster must be thoroughly cleaned, possibly with a high-pressure cleaner, and completely dried.
Conduct adhesion pull-off tests on critical substrates.
Cover or waterproof components susceptible to dirt. Protect weather-exposed working surfaces from rain.
When exposed to sunlight, either shield scaffolding with nets or reschedule work.
Assess the load-bearing capacity and adhesion of existing plaster and coatings.

Address hollow spots by re-plastering and remove non-adherent paint layers entirely. Use high-pressure water to dust-free clean concrete, coatings, or old plaster, allowing them to dry fully.
Stabilize chalky or sandy surfaces with **MIG-ESP® Sealing Primer**.
In outdoor areas, floor slabs and earth-contact walls must be sealed according to water exposure class.
Follow the guidelines of VOB/C DIN 18336 or DIN EN 13914 for substrate assessment and preparation.
Moisture ingress, such as rising damp, must be excluded, as with any insulation measure.
A splatter/render (coverage 50 – 70 %) must be applied to enhance adhesion on existing masonry. Alternatively, full-surface bonding agents made of **MIG 262** can be applied and roughened. No bonding agent is required on new, absorbent substrates/masonry.

Processing / Assembly

The product is applied using a silo mixing pump or commercial plaster machines equipped with insulation plastering equipment. For small areas like defects and reveals, manual application is possible. Fill defects/breakouts in the masonry with suitable material, such as **MIG Therm M 55**, in a separate work step, and roughen the surface. **MIG Therm M 55** can be applied as a plaster layer with a thickness of 10 - 40 mm. For thicker plaster applications, layering with appropriate curing times is necessary. Total insulation plaster thicknesses range from 10 - 100 mm. Roughen plaster surfaces between layers and before topcoat application, preferably using a coarse broom or trowel. Maintain curing times between layers and topcoat application at 3 - 4 days per cm of plaster thickness. For plaster thicknesses exceeding 100 to 150 mm, apply a suitable, corrosion-resistant plaster base like Welnet. After sufficient curing and drying of the insulation plaster, apply a full-surface fabric skim coating using **MIG 262** with **4x4 mm reinforcement fabric**, approximately 6 mm thick. Ensure fabric placement in the upper half of the plaster, overlapping edges by 10 cm. Install corner and edge reinforcements, plaster stop beads, etc., as needed. In indoor areas, fabric skim coating can also be performed with commercially available lime plaster.

Mixing by hand

Use a high-sided mortar bucket, pre-add approximately 12.5 L water per sack, slowly fill in the material, and initially mix at low speed until water absorption into the material is visibly apparent. Then increase the speed, with a mixing time of approximately 40 seconds from this point.

After-treatment / Coating

After-treatment:
Protect fresh plaster from frost, rapid drying and extreme weather conditions such as heavy rain.

Coating:
It is recommended to apply the corresponding primer, **MIG-ESP® Primer quartz-filled**, on the reinforcement layer before applying the finish coat.
Once cured, this can be overlaid with thin-layered, mineral-based finish coats that are compatible with **MIG Therm M 55** due to their diffusion openness.

Suitable colour systems include all diffusion-open **MIG-ESP®** colour systems, as well as silicate and silicone resin paints.
MIG-ESP® coatings provide additional thin-layer insulation, which further enhances insulation performance beyond the low thermal emissivity with additional thermal resistance (see technical data sheets for more information).

Further processing:
After completing the plastering work, the rooms must be ventilated regularly and briefly (impact ventilation: airing out with windows wide open) to ensure good strength formation and substrate adhesion.
Protect the plaster against subsequent moisture penetration.
Plaster that has not yet dried completely must be protected against high temperatures (e.g. artificial heating) and frost exposure through appropriate measures.
When preparing a surface for tiling, the plaster should not be felted but only levelled flat.

Silo and machine technology:
Suitable for application with standard plastering machines, mixing pumps, or manual application. For machine processing, we recommend a wet delivery hose with a diameter of NW 35. Ensure a maximum hose length of 20 m, and use an insulation plaster spiral, rotor, and stator (D6/3, D4/1).

General Information

In cases of doubt regarding application and/or specific project requirements, seek advice.
Do not mix with foreign substances.
Adhere to minimum standard plaster thicknesses. Particularly, observe the regulations outlined in EN 13941, DIN 18550 / DIN EN 998-1, DIN 18350 VOB Part C, and DIN 18533.
MIG Therm M 55 is not suitable for use on foundations; for this purpose, we recommend **MIG Therm L 14 Plinth Plaster**.
Mortar reacts strongly alkaline with water, therefore: Protect skin and eyes, thoroughly rinse with water if in contact, and seek medical attention immediately in case of eye contact.
Refer to the safety data sheet (current SDS available at: www.mig-mbh.de).
Once cured, it is physiologically and ecologically harmless.

Technical Data

Application	exterior and interior
Fire behaviour	A1 (non-combustible), EN 13813
Compressive strength after 28 days	> 2.5 N/mm²
Recommended layer thickness	min. 10 mm max. 40 mm per layer max. 150 mm total plaster thickness
Spread rate	approx. 2,600 L/t dry mortar
Fibres	yes
Adhesive tensile strength, min.	≥ 0.08 N/mm²
Dry bulk density	approx. 0.45 kg/dm³
Processing temperature (air)	Do not apply when air and/or object temperatures are below + 5°C and above + 35°C or when overnight frosts are expected.
Water absorption	WC 1 according to DIN EN 998-1
Water demand	approx. 12.5 L per 15 kg bag
Water vapour permeability	6 µ
Thermal conductivity	$\lambda_{10,\ dry,\ mat}$ = 0.05 W/(m*K) λ_R= 0.055 W/(m*K)
Note	values in the technical data are laboratory values

Consumption

Layer thickness	**mm**	**10**	**15**	**20**	**25**
Consumption	**kg/m²**	4.8	7.2	9.5	12.0
Spread rate	**m²/t**	250	187.5	125	62.5
m²/15 kg/bag		3.7	2.5	1.8	1.5

(The values refer to flat substrate)

Storage

At least 12 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.

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As of: 05–2024

DHMb® Lining System

Packaging

15 kg (per paper bag) x 35 bags (per pallet) = 525 kg

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 provided in this document is derived from our current technical knowledge and experience. Users are reminded that they should conduct their own assessments and trials, as there are numerous factors that may influence the processing and application of our products. The content herein serves as general guidance and does not constitute a legally binding guarantee of specific properties or suitability for a particular application. Users are responsible for adhering to any relevant patents, laws, and regulations.
Please note that the publication of this document renders all previous versions obsolete.

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