RM-150 T



Cement-based, R4 class structural repair mortar

Description
Cement-based, single-component, R4 class, sulfate- and corrosion-resistant structural repair mortar with special quartz aggregates, silica fume, and fiber additives. It is thixotropic, high-strength, and non-segregating..

Advantages
- Structural performance.
- Single-component; only water needs to be added.
- Suitable for vertical and overhead applications due to its thixotropic nature.
- Resistant to sulfates and chlorides.
- Fiber reinforcement minimizes shrinkage cracks.
- Resistant to oils and abrasive salts.
- Corrosion-resistant.
- Provides high adhesion to concrete and reinforcement.
- R4 class with high compressive strength.
- Resistant to freeze-thaw cycles.
- Non-segregating and non-bleeding.
- Non-shrinking.
- Low water permeability.
- Non-flammable.

Applications
- Repair of horizontal, vertical, and overhead areas in all types of reinforced concrete structures, both indoors and outdoors.
- Filling of tie holes and core drill voids.
- Fillet formation and reinforcement applications on columns and beams.
- Repair of industrial floors and concrete surfaces.
- Restoration of raw (exposed) concrete surfaces.
- Repairs of columns, beams, and slabs.
- Repair of precast concrete elements.
- Edge and corner repairs during assembly of concrete elements.
- Repair of corroded reinforcement.
- Protection of concrete against sulfate and chloride attack.
- Maintenance and repair of marine structures.
- Filling of voids and repair prior to coating applications.

Surface Preparation
The substrate must be sound, load-bearing, dust-free, clean, and free of grease or oil. Any loose layers on the surface to be repaired should be removed and cleaned with a wire brush.

If there is water flow on the surface, appropriate drainage must be provided or the water stopped using HammerStop powder plugs. Prior to application, the surface should be saturated with water or a bonding primer should be applied, but no free water should remain on the surface.

Mixing
Place the recommended amount of clean water into a mixing container, then slowly add Hammerfast RM-150 T powder. Mix with a low-speed (400–600 rpm) electric mixer for 3–4 minutes until a homogeneous, lump-free consistency is obtained. After allowing the mixture to rest for approximately 4 minutes, remix for an additional 30 seconds before use.

The recommended water dosage for a 25 kg bag of Hammerfast RM-150 T is 3,5–4,0 liters.

Application
Apply the prepared mortar to the surface using firm pressure with a steel trowel or suitable repair tools. It is essential that the mortar fully adheres to the substrate, filling all voids and eliminating trapped air. Thanks to its thixotropic nature, the mortar can be applied on vertical and overhead surfaces without formwork, and it will not sag.

Before application, the substrate should be saturated with water but free of standing water. To improve adhesion, a thin bonding (contact) layer of the same material can be applied using the “fresh-on-fresh” principle.

The recommended single-layer application thickness is 10–50 mm. For thicker sections, multiple layers should be applied, allowing each layer to gain sufficient set and strength before applying the next. Surface roughening between layers is recommended to improve interlayer adhesion.

In areas with exposed reinforcement, the mortar must completely encapsulate the reinforcement, ensuring no voids remain between the steel and the mortar. Reinforcement may be treated with suitable corrosion protection materials if necessary.

AYK Yapı Kimyasalları San. ve Tic. Ltd. Şti.
Orhaniye Mah. 2076. Sok. No: 4 K.Kazan/Ankara
Tel: +90 313 815 48 15 / Fax: +90 313 815 48 16
E-mail : info@ayk.com.tr / Web: www.ayk.com.tr

AYK Yapı Kimyasalları San. ve Tic. Ltd. Şti. shall not be held responsible for any application defects resulting from use of the product for purposes other than those specified, or from failure to comply with the conditions outlined above.

20.10.2025 / 00

RM-150 T



Cement-based, R4 class structural repair mortar

For large surface applications, sharp edges should be removed and the repair area prepared with as vertical a profile as possible. After application, the surface can be screeded and finished with a trowel at the appropriate time.

After application, the mortar must be protected from rapid water loss, direct sunlight, wind, rain, freezing, and mechanical impacts. For high-strength structural repair mortars, appropriate curing methods (moist covering, curing compounds, etc.) are mandatory to prevent shrinkage cracks.

Setting time will be extended at low temperatures and shortened at high temperatures. Do not apply at temperatures below +5°C or above +35°C.

Consumption

Approximately 18–20 kg/m² per 1 cm layer thickness.

Precautions / Limitations

- Ensure ambient temperature is between +5 °C and +35 °C during application.
- Do not apply on frozen, ice-covered, or frost-risk surfaces.
- Avoid application under direct sunlight or strong wind.
- In hot, windy, and low-humidity conditions, take appropriate curing measures to prevent rapid water loss.
- The substrate should be saturated with water prior to application, but no free water should remain on the surface.
- Do not reuse mortar that has exceeded its pot life by re-mixing with water or dry mortar.
- Not suitable for autoclaved aerated concrete, old painted surfaces, plastered surfaces, stone, or masonry.
- The repair mortar layer should not exceed 50 mm in thickness per application.
- Do not exceed the recommended water-to-powder ratio. Excess water may reduce strength, cause segregation, and promote cracking.
- Do not add water to mortar that has already begun setting to reuse it.
- Exposed reinforcement must be fully cleaned from rust and corrosion, and if necessary, protected with a suitable corrosion inhibitor.
- Do not exceed the recommended maximum thickness for a single layer. Thicker applications should be performed in multiple layers.

Packaging

Supplied in 25 kg kraft bags.
(1 Pallet = 60 bags = 1,500 kg / Pallet dimensions: 80 × 120 cm, h = 100 cm)

Technical specifications

Color	Grey
Composition / Content	Cement-based, polymer- and fiber-reinforced
Application Thickness	Min. 10 mm -max. 50 mm
Water Requirement	3,5-4,0 L per 25 kg (14–16%)
Pot Life (Working Time)	30 minutes
Waiting Time Between Layers	3 hours
Walkable Time / Trafficable Time	24 hours
Full Cure	28 days
Class (EN 1504-3)	R4
Flexural Strength (EN 196)	≥ 8 N/mm² (28 days)
Compressive Strength (EN 12190)	1 day= ≥ 25 N/mm² 7 days = ≥ 50 N/mm² 28 days = ≥ 70 N/mm²
Adhesion (Tensile) Strength (EN 1542)	2 N/mm²
Thermal Compatibility (Freeze-Thaw) (EN 13687-1)	≥ 2 N/mm²
Modulus of Elasticity (EN 13412)	≥ 20 GPa
Capillary Water Absorption (EN 13057)	≤ 0,5 kg/m²·h$^{0.5}$
Carbonation Resistance (EN 13295)	Uygun
Chloride Ion Content (EN 1015-17)	≤ 0,05%
Reaction to Fire	A1

Note: Values measured at 23 ± 2 °C and 50 ± 5% relative humidity.

Storage and Shelf Life

When stored in its original, unopened packaging, in dry, moisture-free conditions, protected from direct sunlight, and at temperatures between +10 °C and +35 °C, the product has a shelf life of 12 months from the date of manufacture. If unused, the packaging should be tightly sealed. A maximum of 2 pallets may be stacked on top of each other.

AYK Yapı Kimyasalları San. ve Tic. Ltd. Şti.
Orhaniye Mah. 2076. Sok. No: 4 K.Kazan/Ankara
Tel: +90 313 815 48 15 / Fax: +90 313 815 48 16
E-mail : info@ayk.com.tr / Web: www.ayk.com.tr

AYK Yapı Kimyasalları San. ve Tic. Ltd. Şti. shall not be held responsible for any application defects resulting from use of the product for purposes other than those specified, or from failure to comply with the conditions outlined above.

20.10.2025 / 00

RM-150 T



Cement-based, R4 class structural repair mortar

Tool Cleaning

All tools used should be cleaned with water immediately after application.

Safety Precautions

- Keep out of reach of children.
- Do not eat or ingest.
- Keep away from foodstuffs.
- Avoid inhalation and contact with skin.
- May cause allergic reactions.
- In case of contact with eyes, rinse thoroughly with plenty of water and seek medical advice.
- It is recommended to use gloves, goggles, and protective clothing during application.
- Wash hands thoroughly with water after use.
- For detailed safety information, refer to the Material Safety Data Sheet (MSDS).

Quality Certificates

- CE
- ISO 9001
- ISO 14001

9001:2015 14001:2015

AYK Yapı Kimyasalları San. ve Tic. Ltd. Şti.
Orhaniye Mah. 2076. Sok. No: 4 K.Kazan/Ankara
Tel: +90 313 815 48 15 / Fax: +90 313 815 48 16
E-mail : info@ayk.com.tr / Web: www.ayk.com.tr

AYK Yapı Kimyasalları San. ve Tic. Ltd. Şti. shall not be held responsible for any application defects resulting from use of the product for purposes other than those specified, or from failure to comply with the conditions outlined above.

20.10.2025 / 00