

NESCOAT® REPCEMENT FORCE

Structural Repair Mortar

DESCRIPTION

NESCOAT® REPCEMENT FORCE is a cement-based, fiber-reinforced, polymer-modified, sulfate- and chloride-resistant R4-class thick structural repair mortar. It is thixotropic in nature and can be applied in a single layer with a thickness of 5-30 mm.

APPLICATION AREAS

- Suitable for horizontal and vertical applications in both indoor and outdoor environments.
- Used for filling tie-rod holes and core drill voids in reinforced concrete structures.
- Ideal for repairing wide cracks, cavities, and damaged areas on high-strength concrete elements.
- Suitable for repair and surface leveling of underground and aboveground structural elements prior to waterproofing applications.
- Can be used for creating high-strength fillets in waterproofing applications.

ADVANTAGES

- Provides high compressive strength.
- Adheres firmly to the surface, preventing peeling or detachment.
- Delivers excellent results in repairing high-strength concrete elements.
- Can be applied in a single layer with a thickness of 5-30 mm.
- Highly resistant to frost and corrosive salts.
- Impermeable to water.

SURFACE PREPARATION

The substrate must be clean, dry, and structurally sound to support the application. In restoration works, weak plaster layers should be mechanically removed entirely. Cracks should be widened in a V-shape to reach stable areas. The surface should be cleaned of dirt, dust, and other adhesion-impairing materials. The surface should be dampened without allowing water pooling. Highly absorbent surfaces should be primed with **NESCOAT® PUREPRIME** transparent primer before application.

MORTAR PREPARATION

Gradually add 25 kg of **NESCOAT® REPCEMENT FORCE** into **3.5-4 liters of clean water** (14-16% water by weight) while mixing with a low-speed mixer. Mix for approximately 3 minutes until a lump-free consistency is achieved. Use the prepared mortar within **30 minutes**, and only prepare the amount that can be used within this time frame. Do not add water or product to reuse hardened material.

APPLICATION

- Apply the mortar to the damaged surface using a spatula or steel trowel, pressing firmly to fill voids and smooth the surface.
- Adjust the mortar thickness as needed for filling gaps.
- For surface leveling applications, ensure the mortar thickness does not exceed 30 mm in a single layer.
- If a thicker application is required, wait 3 hours for the first layer to dry before applying an additional layer.
- To achieve a smoother finish, dampen the surface as the mortar begins to lose moisture and finish with a plastic or wooden trowel.
- Clean hands and tools thoroughly with plenty of water after application.

DRYING TIME

- Surface drying occurs within 1 day at 23 °C and 50% relative humidity. Full curing is achieved in 3 days.
- Drying times are shorter at higher temperatures and longer at lower temperatures.

CONSUMPTION

- 1.8 kg/m² (for 1 mm application thickness)

The specified consumption amounts may vary depending on the surface and application conditions. A sample application is recommended for accurate consumption measurement.

WARNINGS AND RECOMMENDATIONS

- The ambient temperature and surface temperature during application should be between +5 °C and +35 °C.
- After application, the product must be protected from rain and moisture caused by external factors until it sets.
- Avoid application if freezing weather conditions are expected within 3 days of application.
- After application, the surface should be watered in the morning and evening for 2-3 days.
- In cold weather, allow the product at least 3 days to fully dry. This duration allows moisture in the material to evaporate, creating a proper surface for subsequent layers. If this timeframe is ignored and the product is not fully dry before applying the top coat or paint, issues such as whitening (efflorescence) and damage to the coating may occur.

STORAGE AND SHELF LIFE

- The product should be protected from rain, moisture, intense sunlight, and frost.
- Do not stack more than 2 pallets on top of each other.
- The shelf life is 12 months from the date of manufacture under proper storage conditions.
- Opened packages should be tightly sealed and consumed within one week if not used immediately.

PACKAGING

25 kg kraft bag (PE reinforced)

SAFETY RULES

- Appropriate protective equipment (clothing, gloves, goggles, mask) should be used during application.
- In case of contact with the skin, the affected area should be washed with plenty of water.
- For more detailed information, please refer to the Material Safety Data Sheet (MSDS).

QUALITY CERTIFICATES

- Complies with the ISO 9001:2015 quality management standard.
- Complies with the TS EN 1504-3 building materials standard.
- CE marked, compliant with EU standards.



TECHNICAL SPECIFICATIONS

Feature	Value
Appearance	Grey Powder
Compressive Strength	≥ 50 N/mm ²
Flexural Strength	≥ 7 N/mm ²
Bond Strength	≥ 2 N/mm ²
Chloride Ion Content	≤ 0.05%
Reaction to Fire	A1

*The values mentioned above are valid for +23°C and 50% relative humidity.

LEGAL DISCLAIMER

The information in this document has been prepared based on NESCAOT's laboratory tests and field experience. NESCAOT is not responsible for any adverse outcomes resulting from the use of the product outside of its intended purpose or failure to comply with the conditions stated above.