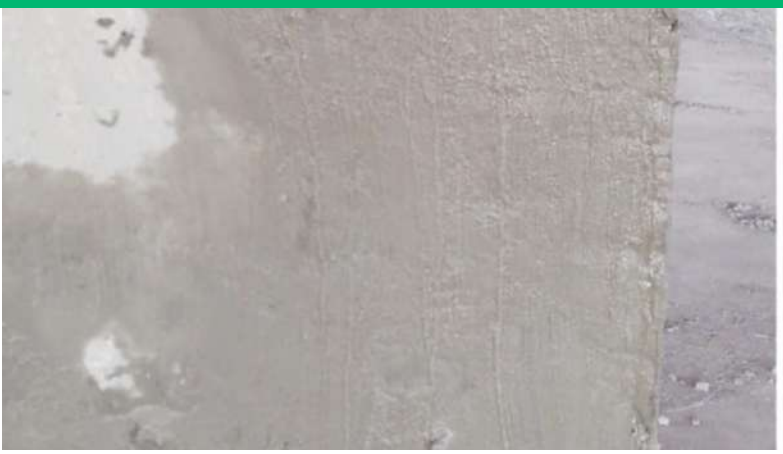
HITi
Construction Revolution

R10 REPAIR

Technical Data Sheet



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DESCRIPTION

HITI REPAIR R10 is an advanced, polymer-modified repair mortar formulated for surface finishing and structural restoration. This product is a ready-to-use solution that complies with Class R3 of the EN 1504-3 standard, ensuring exceptional performance in structural applications.

USES

HITI REPAIR R10 is designed for use in a wide range of applications and can be applied with or without reinforcement mats on both concrete and mortar surfaces. It is also compatible with other HITI mortars. Its primary applications include:

- **Concrete/Mortar Pore Sealing and Leveling:** Provides an effective solution for sealing pores and achieving a smooth, level surface.
- **Thin Layer Render:** Suitable for application as a thin render on both vertical and horizontal structural elements, offering a seamless finish.
- **Minor Defect Repair:** Ideal for repairing minor defects such as pores and honeycombing in concrete.
- **Edge and Joint Restoration:** Facilitates the restoration of structural edges and joints, enhancing durability and aesthetics.
- **Restoration Projects:** Effective for various restoration tasks, improving the surface quality and structural integrity.

CHARACTERISTICS / ADVANTAGES

- **User-Friendly Application:** Designed for ease of application, ensuring a smooth process whether by hand or machine.
- **Compliance:** Meets the requirements of Class R3 according to EN 1504-3, ensuring high performance in structural repair and finishing.
- **Adjustable Consistency:** Can be customized to achieve optimal workability, adapting to specific project needs.
- **No Bonding Primer Required:** Eliminates the need for a bonding primer, streamlining the application process.
- **Versatile Application:** Suitable for both manual and mechanical application, offering flexibility in usage.
- **Low Shrinkage:** Exhibits minimal shrinkage, enhancing the durability and longevity of repairs.
- **Non-Corrosive:** Safe for use in various environments, without the risk of causing corrosion.
- **Fire Rating:** Achieves an A1 fire rating for the grey type, demonstrating excellent fire resistance properties.

PRODUCT INFORMATION

Attribute	Details
Classification	EN 1504-3 Class R3
Composition	Cement, well graded silica sand, polymer, fiber
Packaging	25 kg bags
Appearance / Color	Light grey powder
Shelf Life	Up to 12 months from production when stored under recommended conditions
Storage Conditions	Store in original, undamaged packaging in a dry, cool environment
Mix Density	~ 2 g/cm³
Maximum Grain Size	Dmax: 0.6 mm

APPLICATION INFORMATION

Attribute	Details
Compressive Strength	~40 MPa (EN 12190)
Reaction to Fire	Class A1
Mixing Ratio	~4.0 liters of water per 25 kg bag; 16 % water
Layer Thickness	Standard 5 mm · 1 – 10 mm per layer
Consumption	~8.6 kg/m² at 5 mm standard thickness
Ambient Air Temperature	+5 °C min. / +30 °C max.
Substrate Temperature	+5 °C min. / +30 °C max.
Pot Life	~90 minutes at +25 °C
Primer	Not needed
Paint, traffic or load	After 14 days

APPLICATION PROCEDURE

Surface Preparation

Prior to application, ensure that the concrete surface to be repaired is in a sound condition and free from contaminants that may adversely affect adhesion. Remove all delaminated, weak, damaged, or deteriorated concrete using appropriate methods.

Carefully remove any loose materials using hand chisels or a chipping hammer. In cases where reinforcement is corroded, clean the surface thoroughly to eliminate rust, scale, old mortar, concrete debris, and any other materials that could compromise bonding or exacerbate corrosion. Utilize abrasive blast cleaning or high-pressure water-blasting techniques for effective preparation of the reinforcement.

Mixing

Combine one 25 kg bag of **HITI REPAIR R10** with ~4.0 L of cold water, ideally chilled to below 25 °C. For mixing, use a low-speed hand drill mixer (< 500 rpm) or a force-action mixer if preparing 3 to 4 bags or more, depending on the equipment's capacity. Gradually add the **HITI REPAIR R10** powder while mixing continuously for a minimum of 2 minutes until a homogeneous consistency is achieved. Allow the mixture to stand for 1 to 2 minutes, then remix for an additional 20 seconds. The product is now ready for application.

It is important to avoid adding any extra water or other ingredients after the initial mixing to maintain the product's performance and integrity.

Recommendations

- **Layer Thickness:** Standard thickness 5 mm; apply **HITI REPAIR R10** at 1 – 10 mm per layer. A single pass up to 10 mm is possible when the ambient temperature is between 20 °C and 25 °C and weather conditions are stable.
- **Avoid Extreme Conditions:** Refrain from applying the product in direct sunlight or strong winds.
- **Adherence to Mixing Guidelines:** Do not exceed the recommended water dosage. Excess water can adversely affect the mix's properties.
- **Substrate Preparation:** Ensure that the substrate is properly prepared and sound before application.
- **Avoid Excess Water:** Do not add extra water during surface finishing, as this may lead to discoloration and cracking.
- **Freeze Protection:** Protect freshly applied material from freezing conditions.
- **Paint, traffic or load:** after 14 days.

Curing

- Immediately safeguard the freshly applied **HITI REPAIR R10** mortar from premature drying. Utilize appropriate curing methods such as moist geotextile membranes or polythene sheeting to maintain optimal curing conditions.

Shelf Life

- **HITI REPAIR R10** has a shelf life of up to 12 months from the production date when stored according to the recommendations.

Storage

- **HITI REPAIR R10** should be kept in its original unopened packaging.
- Store the product under cover, away from direct sunlight, and protected from extreme temperatures.
- In tropical climates, it is essential to store the product in an air-conditioned environment.

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