HITi
Construction Revolution

ME05 GROUT

Technical Data Sheet



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Product Description

HITI GROUT ME05 is a high-performance, cementitious grout that is free-flowing and non-shrink. It is designed for precision applications and offers exceptional ultimate strength. This grout is well-suited for use in hot and tropical climates. **HITI GROUT ME05** is **not a tile grout**.

Applications

HITI GROUT ME05 is ideal for grouting in various scenarios, including:

- Machine foundations
- Pre-cast construction columns
- Concrete anchors, cavities, gaps, and recesses
- Base plates
- Core filling
- General concrete repairs (horizontal surfaces)
- Bridge bearing pads
- Filling connections in pre-cast construction

Key Features

HITI GROUT ME05 is a cost-effective and user-friendly grout that requires only the addition of water. It offers several advantages:

- Simple mixing process
- Excellent flow properties
- Dual expansion system
- Adjustable consistency
- High final strength
- Non-corrosive and iron-free

Category	Details
Composition	Portland cement, selected fillers and aggregates, special additives
Packaging	25 kg bag
Shelf Life	12 months from date of production if stored properly in undamaged, unopened, original sealed packaging
Storage Conditions	In dry conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight, heat, and moisture
Appearance and Color	Grey Powder

Compressive Strength at 28 days	~ 43 MPa
Mixing Ratio	13 % – 15 % water · 3.5 L per 25 kg bag (14 %) for flowable consistency
Consistency	Plastic – Flowable
Fresh Mortar Density	~2.2 kg/l (25 °C)
Recommended pouring time	Within 15 minutes (for best performance and before expansion begins)
Layer Thickness	Standard 25 mm · 5 – 60 mm per layer
Consumption	~19 kg/m² of powder at 10 mm thickness
Pot Life	35 minutes at 20 °C
Substrate temperature	+5 °C min. / +30 °C max.
Ambient Air Temperature	+5 °C min. / +30 °C max.
Load / machine installation	After 14 days

APPLICATION INSTRUCTIONS

Preparing the Surface

- Begin by removing any weakened or damaged concrete to expose a solid substrate. All surfaces must be structurally sound before proceeding.
- Roughen the surface to ensure proper adhesion, and remove any dust, mold release agents, oil, paint, debris, or laitance.
- Thoroughly rinse the area with clean water at least 24 hours before applying the grout. The surface should be damp but free of standing water.
- If necessary, use clean, compressed air to blow out any water from bolt holes and other areas.
- If using formwork or shuttering, make sure all joints are tightly sealed to prevent grout leakage.

Mixing the Grout

- Start by adding the required amount of clean, cool water into a rust-free container.
- Gradually introduce **HITI GROUT ME05** while continuously mixing.
- Use a slow-speed (300 – 400 rpm) heavy-duty drill equipped with a sturdy paddle to mix for 1 – 2 minutes. Be careful to avoid creating air bubbles in the mix.

- Scrape down the sides of the container to ensure all powder is incorporated, then mix for another 1 – 2 minutes until the mixture is smooth and fluid. Hand mixing is not allowed.
- For a flowable consistency, use 3.5 liters of water per 25 kg bag of **HITI GROUT ME05**, which equates to a 14 % water-to-powder ratio (range 13 – 15 %).
- Always use water at around +20 °C for optimal mixing results.
- Prepare only the amount of grout that can be applied within the available working time, ensuring a seamless and uninterrupted application process.

Applying the Grout

- Ensure continuous grouting by preparing a sufficient amount of grout before beginning the application.
- Pour the grout steadily from one side of the void to minimize the risk of trapping air bubbles.
- Perform grouting in shaded areas, avoiding the hottest parts of the day and direct sunlight.
- Apply the grout within 15 minutes of mixing to achieve the best performance.
- Avoid grouting in open and unrestrained areas, as the expansion of the grout can cause cracking.
- Load or install machinery after 14 days.

APPLICATION PRECAUTIONS

When working in hot conditions, it's essential to follow these precautions to ensure optimal results with **HITI GROUT ME05**:

- **Storage:** Keep all materials and mixing equipment out of direct sunlight. Store the product in a shaded area to prevent overheating.
- **Water Temperature:** Use cool water when mixing the grout to help maintain an appropriate working temperature.
- **Timing:** Avoid applying the grout during the peak heat of the day or in direct sunlight, as this can negatively impact the application.
- **Mixing:** Prepare only the amount of grout that can be applied efficiently with the available labor and equipment. Ensure that the application is continuous and uninterrupted.
- **Curing:** Following good concrete practices, immediately cure all exposed surfaces of **HITI GROUT ME05** after casting. Use wet hessian covered with polythene sheeting to protect against plastic shrinkage. This step is especially crucial in hot and/or windy conditions to prevent surface cracks.

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