

Product Data Sheet
Edition 07.2008
Identification No. GA -2



KEMGROUT HISTORICAL

Heavy Duty Non-Shrink Cementitious Grout for Historical Buildings & Monuments

Description

A pourable cement base, non-shrink, hydraulic compound especially formulated for use on historical building and ancient monuments.

The material is a blend of Portland cement, pre-graded fillers and additives which impart controlled expansion in the plastic state whilst minimizing water demand. The low water requirements ensure high early strength and long term durability. The filler grading is designed to aid uniform mixing, and minimize segregation and bleeding.

Where to use

KEMGROUT HISTORICAL used for general purpose grouting over a wide range of applications, mainly for historical buildings and ancient monuments.

Advantages

- Ready to use prepacked material that eliminates the possibility of site batching variations.
- No metallic filler used which cause staining or deterioration due to rust expansion.
- Rapid gain of strength facilitating rapid installation and early operation of plant.
- Excellent mechanical properties and low permeability ensures the long term performance of the grout.
- Available in several colours.

Properties

Mechanical properties: in compliance with Compressive strength: DIN 1164

(Variations with consistency at 20°C)

Age (days)	Flowable	Trowable
1	1.50 N/mm ²	1.60 N/mm ²
7	5.0 N/mm ²	6.0 N/mm ²
28	16.0N/mm ²	18.0 N/mm ²

Flexural strength:

(Variations with temperature at flowable consistency)

Age (days)	Flowable
3	0.60 N/mm ²
7	2.20 N/mm ²

- Ultimate anchorage bond strength: 40 N/mm² for concrete after 24 hrs.
- Coefficient of thermal expansion 11x10⁻⁶ per °C .
- Thermal conductivity: 1.5 W/m °C
- Density: 2 gm/cm

Expansion properties:

An expansion of 1-4%. Compensates for plastic settlement in the unset material.

How to use

Surface preparation:

Concrete surface: Must be free from oil. Grease, or any loosely adhering material. If the concrete surface is defective or has laitence, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt debris.

Mixing:

The quantity of water required to achieve the desired consistency and volume used should be in accordance with the following:

Consistency on mixing	Water content at 23°C (lit/25 kg. Sack)
Flowable	4.5
Trowable	3.5

- For best results a mechanically powered grout mixer should be used.
- The selected water content should be accurately measured into the mixer. Slowly add the total contents of the KEMGROUT HISTORICAL pack, add and mix continuously for 5 min. ensuring homogenous consistency.

Application

- Place the grout within 20 min. of mixing to gain benefit of the expansion process.
- KEMGROUT HISTORICAL may be placed in thickness up to 100 mm. in a single pour when used as an underplate grout.
- For thicker sections it is necessary to fill out KEMGROUT HISTORICAL with well graded silt-free aggregates to minimize temperature rise.
- Pouring should be from one side of the void to eliminate the entrapment of air or surplus pre-soaking water.
- The grout head must be maintained at all times, so that a continuous grout front is achieved.
- Where large volumes have to be placed KEMGROUT HISTORICAL may be pumped. A heavy duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps are also suitable.

Curing:

On completion of the grouting operation, exposed areas which are not to be cut back should be thoroughly cured by means of water application, KEMCURE or wet hessian.

Specific application:

- Grouting large volumes For sections thicker than 100 mm. It is necessary to fill the KEMGROUT HISTORICAL with graded 10 mm. silt-free aggregate to minimize temperature.
- The quantity of aggregate should not exceed 1 part aggregate to one part KEMGROUT HISTORICAL by weight. For such mixes a conventional concrete mixer and pump should be used.

Theoretical Coverage: 2 kg/ m²/1 mm thick.

Packaging: KEMGROUT HISTORICAL is supplied in 25 kg sacks.

Storage: KEMGROUT HISTORICAL has a shelf life of 12 months if kept in sealed bags in dry place.

Health and Safety

- Use gloves when handling dry powder.
- Do not breath dust, use a particle mask.

Additional Information

PROKEM provides the construction industry with a comprehensive range of construction chemicals and specialty products answering the queries of modern engineers for trouble free durable structure. PROKEM designs tailor made products should there be critical application that requires specific properties rather than our main range.

For our customer's satisfaction, PROKEM extends technical services to include after sales support to assist users in a proper handling of our products.