



DIVISION 04
GROUT
NATURAL HYDRAULIC LIME BASED

KING HL-5

FEATURES & BENEFITS

- » Contains no sand
- » Compatible with all historic or modern structures
- » Can be pumped or injected by gravity
- » Excellent water vapour transmission properties
- » Pre-mixed, which reduces mixing time on site, ensures good proportions and guarantees a homogeneous grout throughout the project

USES

- » Specially developed to fill voids in masonry structures
- » Can be used indoors or outdoors

KING HL-5 is a pre-mixed and pre-bagged hydraulic lime injection grout specially designed to be used as a grout in order to fill the voids that have been created over time in historic structures. This grout contains no sand and is composed of natural hydraulic lime and other carefully selected components.

EXECUTION

 The application of the grout must comply with the requirements of sections 6 and 8 of CSA-A371-14

MIXING

Mechanical mixing using a high shear colloidal mixer is required when mixing King HL-5. Place 9.5 L (2.50 US gallon) of water into mixer and slowly introduce entire bag of King HL-5. Always mix the entire contents of the bag. Only if additional water is required to meet the target flow slowly add additional water while mixer is running, not exceeding the maximum recommended water content of 10.7 L (2.83 US gallon) per 20 KG (44 lb) bag. Continue mixing for 3 minutes and stop only when material has obtained a consistent homogeneous mix.

GROUT PLACEMENT

If the masonry element to be in contact with the grout has a high rate of absorption, it is preferable to moisten the cavities before the grout is injected.

Make sure there is no standing water in the cavities.

FOR INJECTION APPLICATION

Make sure there are no open mortar joints. Install injection tubes in joints every 300 mm (11.8") horizontally and 300 mm (11.8") vertically. Plug the tubes as the cavities are filled. Agitate the product regularly.

Never inject grout on frozen surfaces.

CLEANING

In order to avoid the use of chemicals, it is recommended to always clean splashes that appear on surfaces such as siding, neighbouring openings, metal flashing etc. in the hour following the installation by using only clean water and a nylon brush.





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LIMITATIONS

- » Never add admixtures on-site to modify set time, workability or any other properties of the plastic or hardened grout
- » Never use KING HL-5 on frozen elements or mortar

OPTIMAL PERFORMANCE

» Surface and grout temperature should be between 5°C and 35°C (40°F and 95°F) and kept within this range for 3 days (72 hours) after the end of the work.

PACKAGING

This product is packaged in 20 KG (44 lb) triple-lined bags or bulk bags, wrapped on wooden pallets.

STORAGE AND SHELF LIFE

Always store in a dry area, protected from the weather. On-site, an additional tarp must be used to cover the product to prevent water infiltration. Unopened, properly stored bags have a shelf life of 12 months.

SAFETY PROCEDURES

This product is made of Portland Cement. Wearing safety equipment used for the handling of cement based products is therefore recommended: rubber gloves, dust mask, and safety glasses. Safety Data Sheets can be provided upon request.

KING HL-5

TECHNICAL DATA*	
FLOW	
ASTM C 939	10 – 30 seconds
COMPRESSIVE STRENGTH	
ASTM C 109	
7 Days	3 MPa (435 psi)
28 Days	5 MPa (725 psi)
90 Days	8 MPa (1160 psi)
BLEEDING AND SEGREGATION	
ASTM C 940	2% Maximum
WATER RETENTION	
ASTM C 1506	70% Minimum
YIELD PER 20 KG (44 LB) BAG	0.02 m³ (0.66 ft³) of fresh grout

^{*}All the values expressed are average values and are obtained under laboratory conditions.

Note: The contents of this Technical Data Sheet are updated regularly. To ensure that you have the most recent version, please visit our website at the following address: www.king-masonry.com

This product is designed to meet the performance specifications outlined in this product Technical Data Sheet. If the product is used in conditions for which it was not intended, or applied in a manner contrary to the written recommendations contained in the product data sheet, the product may not reach such performance specifications. The foregoing is in lieu of any other warranties, representations or conditions, expressed or implied, including, but not limited to, implied warranties or conditions of merchantable quality or fitness for particular purposes, and those arising by statute or otherwise in law or from a course of dealing or usage of trade.

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