



## PRODUCT DATA SHEET

# King® 1-1-6 Plus

Masonry mortar for laying applications

### PRODUCT DESCRIPTION

The King® 1-1-6 Plus is a premixed, factory-bagged mortar specially designed for laying bricks, natural stone, concrete blocks and other masonry products.

It is formulated with Portland cement, type S hydrated-lime, an air-entraining admixture and masonry sand with controlled grain size. King® 1-1-6 Plus retains its consistency and ease of application, even after some time, without the addition of water and/or re-mixing.

### WHERE TO USE

- Laying clay brick, natural stone or concrete blocks
- Can be used for interior and exterior applications
- Parging
- Any other masonry application where high bond strength is required
- Repointing of modern buildings (contact your Sika Technical Representative)

### PRODUCT INFORMATION

**Packaging** 30 kg (66 lb) triple-lined bag

**Appearance / Colour** Powder / Grey

**Note:** King® 1-1-6 Plus may be coloured at the job site using the King® ColourPlus Pigment System exclusive to Sika Canada. All pigments used conform to the requirements of ASTM C979 Pigments for Integrally Colored Concrete.

**Shelf Life** 12 months in original, unopened bag

**Storage Conditions** Always store in a dry area, protected from the weather. At the job site, an additional tarpaulin must be used to cover the product to prevent water infiltration.

### CHARACTERISTICS / ADVANTAGES

- Finer texture than King® 1-1-6
- Increased ease of finishing mortar joint
- Factory-calibrated mix
- Superior adhesion
- High vapour transmission properties
- Increases waterproofing capacity of the masonry wall
- Good resistance to freeze-thaw cycles
- Self-healing properties

### APPROVALS / CERTIFICATES

King® 1-1-6 Plus complies with Table 6 of CSA A179 for Type N mortar with addition of water in the field.

## TECHNICAL INFORMATION

### Compressive Strength

#### ASTM C109 - Minimum

7 days	28 days
3.5 MPa (508 psi)	6.5 MPa (943 psi)

**Note:** The pigments used to colour the mortar have no effect on the mechanical properties of the mortar.

### Shrinkage

#### ASTM C596

0.149 % at 91 days

### Water Vapour Transmission

#### ASTM E96

29 perms

### Freeze thaw resistance

#### ASTM C666M

50 cycles

### Water Absorption

#### ASTM C1506 / Water Retention

Minimum 70 %

### Porosity

#### EN-1015-7 Method / Air Content

Maximum 18 %

## APPLICATION INFORMATION

### Yield

Approx. 0.018 m<sup>3</sup> (0.65 ft<sup>3</sup>) of fresh mortar per bag of 30 kg (66 lb)

### Product Temperature

Refer to the "Placement condition" section on the [Specifications template](#) document on Sika Canada Website.

### Ambient Air Temperature

Refer to the "Placement condition" section on the [Specifications template](#) document on Sika Canada Website.

### Substrate Temperature

Refer to the "Placement condition" section on the [Specifications template](#) document on Sika Canada Website.

### Flowability

#### ASTM C1437 / Flow

110 % +/- 5 %

## BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

All values required by the CSA A-179 Standard, as well as values of the King® 1-1-6 Plus product, are obtained under laboratory conditions. The values of the King® 1-1-6 Plus product are applicable when the product is used

as a laying mortar; if the product is used as a repointing or parging mortar, the values will be different.

## LIMITATIONS

- Do not use King® 1-1-6 Plus when Type S mortar is specified, use King® 2-1-9 or King® Block instead.
- Never add admixtures at the job site to modify set time, workability, or any other property of the mortar in its plastic or hardened state.
- Always use potable water.
- Use only the recommended water dosage to obtain the desired properties of the mortar in its plastic or

#### Product Data Sheet

King® 1-1-6 Plus

February 2025, Version 01.01

021850101000000188

**BUILDING TRUST**  
**CONSTRUIRE LA CONFIANCE**



- hardened state.
- Never use on frozen surfaces.
  - Do not use for below ground level applications
  - Colour variations on the hardened mortar can be observed even if the mortar in-place has been previously factory-coloured and complies with the project specifications. These colour variations are mainly attributable to inadequate application conditions such as delay between mixing and tooling of joints, lack of protection against the weather during installation, or variable absorption/moisture rates of the construction elements. In order to avoid an undesirable result, we recommend that you pay particular attention to these points.

## ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### MIXING

#### For small mortar batches

Important: In order to avoid segregation issues, always mix the total content of one bag. If less than a 30 kg (66 lb) of King® 1-1-6 Plus is required, dry mix - without water – the entire content of a bag in a clean container, take the required amount, and then add water to the amount withdrawn from the mixture.

#### For large mortar batches

Always mix the entire contents of the bag. Mix the King® 1-1-6 Plus with a maximum of 5.2 L (1.32 US gal.) of water per 30 kg (66 lb) bag in a clean mortar mixer. Pour 4.7 L (1.25 US gal.) of water into the mixer and add 30 kg (66 lb) of King® 1-1-6 Plus. Mix for three (3) to five (5) minutes, or five (5) to ten (10) minutes when a colourant is added at the job site. Allow the mortar to stand for a short period of time. Using the remaining water, adjust the mortar to obtain the desired consistency.

Once the desired consistency is achieved, it is not recommended to add water to the coloured mortars in order to compensate for water loss caused by evaporation. Adding water may affect the final colour of the product.

### APPLICATION

The application of the mortar must comply with the requirements of Sections 6 and 7 of CSA A371.

## APPLICATION METHOD / TOOLS

### TOOLING OF THE JOINTS

The tooling of joints exposed to rain is an important step that contributes to the waterproofing of the masonry system and must be done using a jointer. The amount of water present in the mortar joint at the time of tooling will determine the final colour of the cured mortar. To avoid colour or shade variation, ensure that the mortar joint always contains the same amount of water when it is tooled. As a general rule, the joint is considered ready to be tooled when the mortar has hardened sufficiently such that a finger mark remains. Unless otherwise stated, a concave joint is preferred.

### CLEANING

In order to avoid the use of chemicals, it is always advisable to remove as many mortar splashes or stains as possible before the material hardens. Uses water, a piece of burlap or wood. If the use of cleaning products is necessary, be sure to contact the manufacturer of the product to validate the compatibility and the procedure to follow. It is important to mention to the manufacturer that this is a hydrated lime-based mortar to which iron oxide and titanium pigments are added for colouring purposes. Regardless of the technique or product selected, it is essential to preserve the integrity of the mortar. Be sure to clean a test area before proceeding with the work.

Clean all tools and equipment after use with water. Once hardened, the product can only be removed mechanically.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## LEGAL NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended

application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: [www.sika.ca](http://www.sika.ca)

**Sika Canada Inc.**

Head Office  
601, avenue Delmar  
Pointe-Claire, Quebec  
H9R 4A9  
1-800-933-SIKA  
[www.sika.ca](http://www.sika.ca)

**Other locations**

Boisbriand (Quebec)  
Brantford; Cambridge;  
Sudbury; Toronto (Ontario)  
Edmonton (Alberta)  
Surrey (British Columbia)

**Product Data Sheet**

King® 1-1-6 Plus  
February 2025, Version 01.01  
021850101000000188

