CULTURED BRICK & STONE

The installation of cultured brick and stone is not overseen by the CSA standards.

However, taking into account the specific desired mortar properties, Sika recommends the use of a polymer-modified mortar such as King® MasonBond 400®.

COLOUR MATCHING

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TRAINING CENTRE

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OUR LOCATIONS

Head Office
601, Delmar Avenue,
Pointe-Claire (Quebec) H9R 4A9

Other locations
Boisbriand (Quebec)
Brantford ; Cambridge ; Sudbury ; Toronto (Ontario)
Edmonton (Alberta)
Surrey (Colombie-Britannique)

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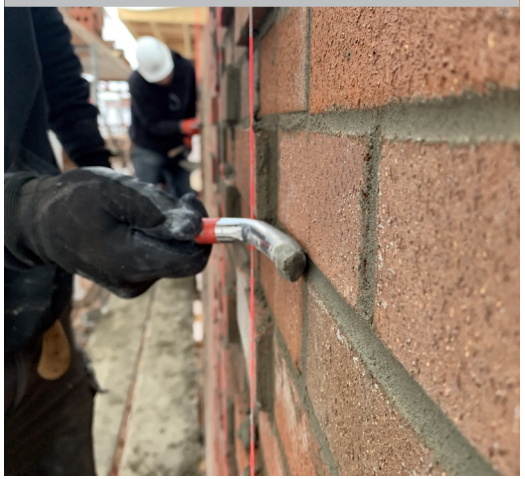


BUILDING TRUST
CONSTRUIRE LA CONFIANCE

BUILD

SELECTION GUIDE FOR MORTARS AND GROUTS FOR NEW CONSTRUCTION

SELECTION GUIDE FOR MORTARS AND GROUTS FOR MODERN MASONRY UNITS (CSA A 179-14, TABLE A.1)

APPLICATION	APPLICATION BUILDING SEGMENT	RECOMMENDED MORTAR TYPE	KING PRODUCT
EXTERIOR, ABOVE GROUND	Load-bearing walls requiring high compressive strength	S	King® 2-1-9
	Load-bearing walls requiring low compressive strength	N	King® 1-1-6
	Non-load-bearing walls	N	King® 1-1-6
	Parapets walls and masonry exposed to a high level of saturation such as chimneys and free-standing exterior walls	S	King® 2-1-9
EXTERIOR AT/OR BELOW GROUND LEVEL	Foundation walls, retaining walls, man-holes, sewers, pavement, walks, patios	S	King® 2-1-9
INTERIOR	Load-bearing walls requiring high compressive strength	S	King® 2-1-9 King® Block
	Load-bearing walls requiring low compressive strength	N	King® 1-1-6 King® MasonGO 100
	Non-load-bearing walls	N	King® 1-1-6 King® MasonGO 100

MINIMUM COMPRESSIVE STRENGTHS (CSA A179-14 TABLE 6)		LABORATORY	ON SITE
TYPE N	7 Days	3.0 MPa (435 psi)	2.0 MPa (290 psi)
	28 Days	5.0 MPa (725 psi)	3.5 MPa (508 psi)
TYPE S	7 Days	7.5 MPa (1088 psi)	5.0 MPa (725 psi)
	28 Days	12.5 MPa (1813 psi)	8.5 MPa (1233 psi)

NOTE: This selection guide only applies to new construction. In the case of a restoration project, please refer to the selection **guide for mortars and grouts for restoration of historical buildings** published by Sika, and available on the website at www.sika.ca

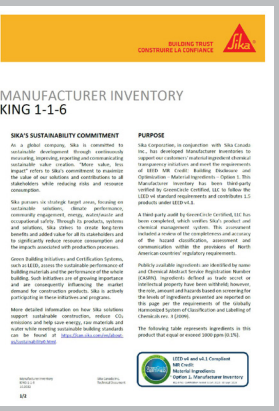
SELECTION GUIDE FOR GROUTS

LOAD-BEARING CAPACITY*	PRODUCT**	MPA (PSI) @ 28 DAYS
MEDIUM	King® CELLFILLER E-20	20 MPa (2900 psi)
HIGH	King® CELLFILLER E-30	30 MPa (4350 psi)

*Sika Canada recommends to always consult a structural engineer when calculating the loadbearing capacities of a wall.

**All masonry grouts presented in this guide are of expansive type. Sika Canada recommends always to use a grout with expansive properties. The expansion compensates for the shrinkage usually observed.

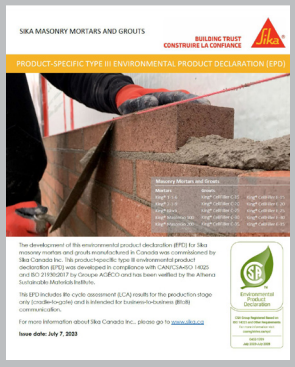
SUSTAINABILITY & LEED CONTRIBUTIONS


BUILDING TRUST
CONSTRUIRE LA CONFIANCE

MANUFACTURER INVENTORY
KING 1-1-6

SIKA'S SUSTAINABILITY COMMITMENT

PURPOSE



All the masonry mortars and grouts presented in this guide contribute towards satisfying the following LEED®v4/v4.1 Credits:

- MR Credit - Building Product Disclosure & Optimization: Environmental Product Declaration
- MR Credit - Building Product Disclosure & Optimization - Material Ingredients: Manufacturer Inventory
- MR Credit - Building Product Disclosure & Optimization - Sourcing of Raw Materials: Raw material source & extraction reporting

Visit the Mortars and Masonry Grouts section of the Sika Canada website to discover our product portfolio and resource centre including:
Product Data and Safety Sheets, Colour Charts, Quantity Estimator, Selection Guides, Specification Templates and LEED documentation.

The production of all Sika products is governed by an ISO 9001:2015 certified management system.

Rev 09-2023

C AND VC SERIES

Nowadays, the particle of the sand used in modern mortars is often not suitable for the restoration of historic buildings. Reason why we introduced the C and VC series mortars contains a coarser sand. The majority of restoration mortars now manufactured by Sika Canada are available in regular version, C Series or VC Series.

COLOUR MATCHING

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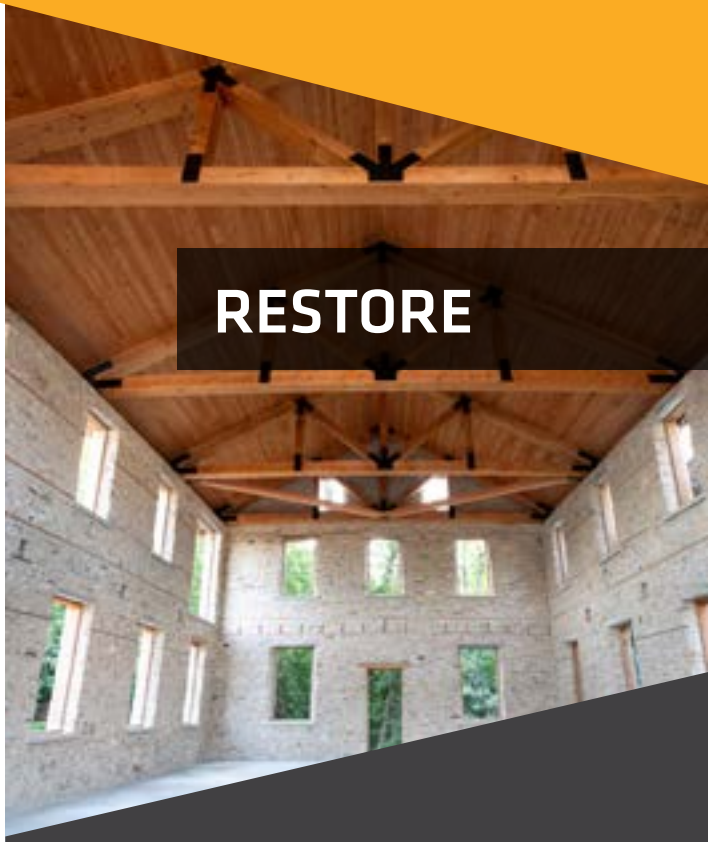

RESTORE

SELECTION GUIDE FOR MORTARS AND GROUTS FOR THE RESTORATION OF HISTORICAL BUILDINGS

MORTAR SELECTION

YEAR OF CONSTRUCTION	TYPE OF WORK	COMPRESSIVE STRENGTH [a]	RECOMMENDATIONS
BEFORE 1900	BEDDING	LOW-MEDIUM	King® HLM-500
		MEDIUM-HIGH	King® HLM-500
	REPOINTING	LOW-MEDIUM	King® HLM-350
		MEDIUM-HIGH	King® HLM-500
FROM 1900 TO 1940	BEDDING	LOW-MEDIUM	King® HLM-500 or King® MasonMix
		MEDIUM-HIGH	King® MasonMix 600
	REPOINTING	LOW-MEDIUM	King® HLM-350 or King® MasonCare® 300 or King® MasonCare® 1258
		MEDIUM-HIGH	King® HLM-500
FROM 1940 TO 1975	BEDDING	LOW-MEDIUM	King® HLM-500 or King® MasonMix
		MEDIUM-HIGH	King® MasonMix 600
	REPOINTING	LOW-MEDIUM	King® MasonCare® 300 or King® MasonCare® 1258
		MEDIUM-HIGH	King® HLM-500 or King® MasonMix 600
FROM 1975 TO TODAY	BEDDING	LOW-MEDIUM	King® 1-1-6
		MEDIUM-HIGH	King® 2-1-9
	REPOINTING	LOW-MEDIUM	King® MasonCare® 300 or King® MasonCare® 1258
		MEDIUM-HIGH	King® 1-1-6 or King® 2-1-9

[a] Low to medium compressive strength: regular walls.
Medium to high compressive strength: Parapets, foundation wall, chimney, load bearing walls, stairs.

PRODUCT	APPLICATION	BINDER	AVERAGE COMPRESSIVE STRENGTH [b]		MINIMUM CURE
			7 days	28 days	Humid [d]
King® HLM-350	Repointing	Hydraulic Lime	0.7 MPa (101 psi)	1.8 MPa (145 psi)	3-7 days
King® HLM-500	Bedding	Hydraulic Lime	0.7 MPa (101 psi)	1.8 MPa (145 psi)	3-7 days
King® HLM-500	Repointing	Hydraulic Lime	More than 3MPa (435 psi) at 28 days [c]		3-7 days
King® 1-1-6	Bedding	Lime-Cement	3.5 MPa (435 psi)	6.5 MPa (943 psi)	No
King® 1-1-6	Repointing	Lime-Cement	More than 7 MPa (1015 Psi) at 28 days [c]		3-7 days
King® MasonCare® 300	Repointing	Lime-Cement	3.5 MPa (507 psi)	4 MPa (580 psi)	3-7 days
King® MasonCare® 1258	Repointing	Lime-Cement	4 MPa (580 psi)	4.5 MPa (652 psi)	3-7 days
King® MasonMix	Bedding	Lime-Cement	2 MPa (290 psi)	2.5 MPa (363 psi)	No
King® MasonMix 600	Bedding	Lime-Cement	3 MPa (435 psi)	4 MPa (580 psi)	No
King® MasonMix 600	Repointing	Lime-Cement	More than 6 MPa (870 Psi) at 28 days [c]		3-7 days

[b] Compressive Strength: Results obtained in laboratory, on site result may vary.
[c] Final resistance will depends on many factors.
[d] Time for cure depends on many factors, especially winds and temperature.
NOTE: This selection guide applies to masonry restoration project. In the case of a new construction, please refer to **the selection guide for mortars and grouts for new construction** published by Sika Canada, and available on the website at www.sika.ca

SELECTION CRITERIA FOR MORTARS

Several principles must be respected when it comes to successful restoration projects. Among the most important, are the following:

- Avoid introducing a raw material that was not part of the original building;
- In terms of compressive strength, the new mortar should be of equal or lower value than the original mortar;
- In terms of vapour transmission, the new mortar must have equal or higher values then the original mortar.

Other factors to consider include the following:

- The time of the year when the restoration work will take place;
- The building element to be restored (i.e. Chimney, buttress, foundation wall, etc.) ;
- The time frame, work-force, budget, etc.

GROUT SELECTION

YEAR OF CONSTRUCTION	RECOMMENDATIONS
Before 1900	King® HL-5
From 1900 to 1975	King® HL-5 or King® RPL-6
From 1975 to today	King® RPL-6 or King® RPL-20

PRODUCTS	BINDER	COMPRESSIVE STRENGTH AT 28 DAYS
King® HL-5	Hydraulic lime	5 MPa (725 psi)
King® RPL-6	Air Lime and Portland Cement	6 MPa (870 psi)
King® RPL-20	Air Lime and Portland Cement	15-20 MPa (2175-2900 psi)

Visit the Masonry Heritage Mortars & Grouts section of the Sika Canada website to discover our product portfolio and resource centre including:
Product Data and Safety Sheets, Selection Guides and Specification Templates.

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