ACIDSIL™ K Acid Resistant Mortar

MORTAR

ACIDSIL™ K Acid Resistant Mortar is an improved silicate type, acid proof mortar. This mortar consists of a potassium silicate binder and a finely divided, silica filler. The potassium silicate binder produces a mortar with less flexing effect and eliminates the sodium carbonate bloom. The mortar hardens by internal chemical action which produces an insoluble silica gel. ACIDSIL K Mortar is resistant to operating temperatures as high as 1600°F (871°C). ACIDSIL K Mortar is not subject to crazing or growth in the joints, which produces brickwork failures. ACIDSIL K Mortar is resistant to all acids and salts, except those containing fluorine. The mortar contains no reactive chemicals which prevent its use in highly concentrated acids. Since this mortar is a 100% inorganic composition, it is entirely unaffected by strong oxidizing agents. ACIDSIL K Mortar is totally inert to all organic solvents. It is not recommended for continuous service in alkaline solutions of greater strength than a pH of 10.

APPLICATION

ACIDSIL K Mortar should be mixed in the ratio of 2 parts filler to 1 part binder by weight. The filler should be worked into the binder slowly so as to prevent air entrainment. This mixture produces a mortar of the proper consistency for laying brick. Thinning the mortar by addition of water or excess binder will interfere with the hardening action and lower the resistance of the finished mortar joint.

The working life of the ACIDSIL K Mortar depends upon the temperature. Best results are obtained by mixing small batches of mortar. After mixing, the mortar should be spread evenly over the bottom of the pan. When the mortar fails to adhere to brick, it has begun to set and must be discarded. Nothing can be added to partially set mortar to renew its original consistency.

ACIDSIL K Mortar is handled in the same manner as ordinary building cement. It never should be applied to wet or frozen brick, or to acid soaked surfaces. Joints between brick should be made as thin as possible, preferably not over 1/8" (3 mm) wide. For corrosive services, the use of thin joints is more important than straight mortar lines. When working at temperatures below 50°F (10°C), the hardening action may be hastened by heating the brick and ACIDSIL K Mortar components to about 80°F (27°C) prior to installation. Maintain the temperature in the vessel at a minimum of 50°F (10°C) until the mortar has set.

SAFTEY

ACIDSIL K Powder should be handled carefully to avoid excessive dust. Dust respirators should be worn during the mixing operation. Due to the fact that the ACIDSIL™ K Solution is caustic, gloves, eye goggles, and long sleeved shirts should be worn to protect the skin.
Material Safety Data Sheets should be read before use.

PHYSICAL DATA

Bulk Density (ASTM C 905)	112 lb/ft^3	1,794 kg/m^3
Bond Strength (ASTM C 198)	225 psi	1.6 MPa
Coefficient Thermal Expansion (ASTM E 228)	6.5*10^{-6} in/in/°F	11.7*10^{-6} mm/mm/°C
Tensile Strength (ASTM C 307)	400 psi	2.8 MPa
Water Absorption (ASTM C 143)	4%	4%
Apparent Porosity	8%	8%
Color	White	White

NOTE: The information contained in this bulletin is believed to be accurate and reliable but is not to be construed as implying any warranty or guarantee of performance. Data are subject to reasonable variations and should not be used for specification purposes.

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