

## TECHNICAL BULLETIN – M 547 D

### ACIDSIL Z

#### Acid Resistant Mortar

### Product Description

ACIDSIL Z Acid Resistant Mortar is a halogen-free silicate type mortar made with a selective size graded silica and zircon fillers. The liquid binder is a potassium silicate designed for high loading plus good workability.

In steam impingement environments, the ACIDSIL Z Mortar holds up better than typical silicate mortars.

### Application

ACIDSIL Z Mortar is shipped in 45 lb (20 kg) pails or 600 lb (273 kg) drums of binder and 51 lb (23 kg) bags of filler. It will keep indefinitely if stored at temperatures above freezing.

Add Four (4) parts by weight of ACIDSIL™ Z Powder to 1-part ACIDSIL™ Z Solution and mix thoroughly. The working life is approximately 20-30 minutes depending on the temperature. (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 ACIDSIL Z 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 Z 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" 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 Z 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.

### Safety

ACIDSIL Z Powder should be handled carefully to avoid excessive dust. Dust respirators should be worn during the mixing operation. Since the ACIDSIL Z 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.

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### Typical Physical Data

Water Absorption	1 %	1 %
Apparent Porosity	13 %	13 %
Bulk Density	136 lb/ft <sup>3</sup>	2,178 kg/m <sup>3</sup>
Compressive Strength	5,000 psi	34 MPa
Coefficient Thermal Expansion	5.6*10 <sup>-6</sup> in/in/°F	10.0*10 <sup>-6</sup> mm/mm/°C
Modulus of Rupture	1,100 psi	7 MPa
Tensile Strength	500 psi	3.5 MPa
Color	White-Gray	White-Gray

The Physical Data derived by using ASTM test methods: C-905 Bulk Density, C-579 Compressive Strength, E-228 CTE, C-580 MOE, C-307 Tensile Strength and C-143 Water Absorption.

#### 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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