HB™ Mortar

SELECTION & SPECIFICATION DATA

Type

Potassium silicate brick mortar

Description

HB Mortar is a 2-component, halogen-free high performance potassium silicate brick mortar used to bond and bed acid brick in chemical environments.

Uses

- Butter industrial ceramics such as acid brick
- Brick linings in contact plant sulfuric acid manufacturing process vessels
- Brick linings in industrial and thermal power plant chimneys
- Brick linings in demanding process vessel applications such as pressure leaching autoclaves

Features

- Unique catalyst system for enhanced performance
- Creamy, buttery consistency
- High temperature resistance
- Resists strong oxidizing acids including nitric, chromic and sulfuric
- Low shrinkage
- High bond strength
- No acid washing required
- Fluoride-, sodium- and calcium-free, eliminates potential sulfation-hydration reactions
- Improved water wash-out and steam resistance when compared to other potassium silicate mortars

Limitations

- Not for use beyond its chemical resistance or thermal capabilities. Do not use in hydrofluoric acid service or caustic environments. Consult ErgonArmor with specific questions.

INSTALLATION GUIDANCE

Reference Specifications

CES-358 ErgonArmor Specification for Brick Mortar Mixing

Installation Conditions

HB Mortar is formulated for ideal handling at 70°F (21°C). Do not use if temperature of mortar or components are below 50°F (10°C). If temperatures are below 50°F (10°C), condition components and substrate before application.

Ratio

1.0 part solution: 2.5 parts powder by weight.

Powder loading may be adjusted slightly to suit individual bricklayer handling preferences.

Mixing

Pour measured quantity of solution into clean, dry mixing vessel. Slowly add measured quantity of powder to solution and mix thoroughly until fully blended.

Work Life

1-2 hours at 50°F (10°C)
30-60 minutes at 70°F (21°C)
15-30 minutes at 90°F (32°C)

Cleanup

Water

CURE TIME

Temperature	Initial Set	Full Cure
70°F (21°C)	5-8 hours	72-96 hours

SAFETY

Safety

Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.

Ventilation

Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.

HB™ Mortar

PACKAGING, ESTIMATING & HANDLING

Product	Code	Packaging
HB Solution	19573 19574	44 lb (20 kg) pail 600 lb (272 kg) drum
HB Powder	19575	55 lb (25 kg) bag

A 1.34 cubic foot (154 lb or 70 kg) unit consists of 1 x 44 lb (20 kg) pail of solution and 2 x 55 lb (25 kg) bags of powder.

Theoretical Coverage

Consumption will vary based on brick size and joint width. Consult estimating guide CES-145.

Storage & Shelf Life

Maintain products in original packaging and sealed until ready for use. Estimated shelf life for the solution is 12-18 months when stored in a dry area at 70°F (21°C). Actual shelf life may vary with storage conditions.

If there is any question with respect to the quality of the components, check reactivity prior to use. For assistance consult with ErgonArmor.

TYPICAL PHYSICAL PROPERTIES

Property	Typical Value
Color	White
Density, ASTM C138	115 lb/ft^3 (1,843 kg/m^3)
Compressive strength, 28-day, ASTM C579	>5,400 psi (37 MPa)
Tensile strength, 7-day, ASTM C307	>385 psi (2.7 MPa)
Flexural strength, ASTM C453	>1,500 psi (10.3 MPa)
Bond strength to brick (pull blocks)	>300 psi (2.1 MPa)
Maximum service temperature	1,650°F (900°C)

Temperature limitations will vary with chemical exposure. Consult ErgonArmor Technical Service for guidance.

Rev 08/2021

Division of Ergon Asphalt & Emulsions, Inc. | P.O. Box 1639, Jackson, MS 39215-1639 | 601-933-3381 Fax | 601-933-3595 Phone | 877-98ARMOR Toll-Free | ergonarmor.com