

PRODUCT DATA

SMITHFIELD AIR-SET FIREPLACE MORTAR

ALSEY Smithfield Air-Set Refractory Fireplace Mortar— Medium Duty

Description:

Wet, air-setting, medium duty 2700°F, refractory mortar formulated to be used with our SMITHFIELD UNBRANDED Medium Duty Firebrick.

Sizes:

- 15lb plastic pail {2A1025}
- 50lb plastic pail {2A1050}

Application:

The material is ready-mixed; however, some liquid will come to the top and must be thoroughly mixed in before using. If mortar is frozen, allow pail to thaw at room temperature.

This air-setting mortar should be tightly capped as soon as possible, as it will begin setting up once in contact with air.

We recommend a 1/16" to 1/8" joint when laying up firebrick. Approximately 35 to 40lbs. of mortar will lay up one hundred 9 x 4½ x 2½" straights (depending on the thickness of the joint).

Typical set time is between 48 and 72 hours; however, set times can be as long as a few weeks, especially in situations where construction occurs during cooler temperatures with high humidity levels. These conditions could cause the surface of the mortar to harden while the mortar within the joint will stay workable. Application to damp brick will also slow the set time. Once all moisture has evaporated, the mortar will finish setting up. Mortar must be completely dry before applying heat.

Cautions:

Do not use in outside installations. This mortar is water soluble and will eventually erode if exposed to rain or snow melt.

Do not use as filler for voids. Mortar will experience shrinkage and cracking if applied thicker than ¼".

If your application requires the above conditions, please consider using our ALSEY Flue-Set Non-Water Soluble Refractory Mortar.

TYPICAL TEST DATA -- PHYSICAL PROPERTIES

| | |
|---|------|
| ASTM C-24 | |
| P.C.E. | 29 |
| Temperature Equivalent (melting), °F | 3018 |
| Service Temperature (max. recommended), °F..... | 2700 |

| | |
|--|------|
| ASTM C-20 | |
| Apparent Porosity, % | 35.4 |
| Apparent Specific Gravity g/cc | 2.46 |
| Bulk Density (fired), lb/ft ³ | 99.3 |

| | |
|-----------------------|-----|
| ASTM C-198 | |
| Bonding Strength, psi | |
| After 230°F..... | 207 |
| After 2730°F..... | 584 |

ASTM C-199—High Duty
Pier Test at 2730°F
No flow from joints. No cracks or shrinkage.

Typical Chemical Analysis, wt. % (calcined basis)

| | |
|--|-------|
| Silica (SiO ₂)..... | 92.14 |
| Aluminum Oxide (Al ₂ O ₃) | 4.41 |
| Sodium Oxide (Na ₂ O)..... | 2.48 |
| Titanium Dioxide (TiO ₂)..... | 0.42 |
| Potassium Oxide (K ₂ O)..... | 0.22 |
| Iron Oxide (Fe ₂ O ₃)..... | 0.21 |
| Calcium Oxide (CaO)..... | 0.06 |
| Magnesium Oxide (MgO)..... | 0.06 |

Total..... 100.00

Loss on Ignition..... 4.73
(As received basis; not included in calcined total.)

An MSDS is available upon request

Contact:

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