



**ALSEY**  
refractories co.

# PRODUCT DATA

## SMITHFIELD AIR-SET REFRACTORY FIREPLACE MORTAR

Wet, air-setting, medium duty 2700°F refractory mortar.

[formulated to be used with SMITHFIELD UNBRANDED MEDIUM DUTY FIREBRICK]

### TYPICAL TEST DATA

#### CHEMICAL ANALYSIS [Wt. % Calcined Basis]

Silica [SiO <sub>2</sub> ].	92.14
Aluminum Oxide [Al <sub>2</sub> O <sub>3</sub> ].	4.41
Sodium Oxide [Na <sub>2</sub> O].	2.48
Titanium Dioxide [TiO <sub>2</sub> ].	0.42
Potassium Oxide [K <sub>2</sub> O].	0.22
Iron Oxide [Fe <sub>2</sub> O <sub>3</sub> ].	0.21
Magnesium Oxide [MgO].	0.06
Calcium Oxide [CaO].	0.06
Total	100.00
Loss on Ignition, 1000°C	4.73

Sizes:	15lb plastic pail (4/case)	[2A1025]
	50lb plastic pail	[2A1050]
	10oz caulk tube (12/case)	[2A1120]

Air-Set Refractory Mortar is accepted and approved by all national building codes including:

- The International Code Counsel
- The International Residential Building Code
- The National Fire Protection Association

#### CAUTION:

DO NOT use in outside installations. This mortar is water soluble and will eventually erode if exposed to rain or snow melt. Store sealed drums indoors in ambient conditions.

DO NOT use as filler for voids. Mortar will experience shrinkage and cracking if applied thicker than 1/4".

*If your application requires either of the above conditions, please consider using ALSET FLUE-SET Non-Water Soluble Refractory Mortar.*

#### PHYSICAL PROPERTIES

ASTM C-24

P.C.E.	29
Service Temperature [max. recommended], °F	2700
Temperature Equivalent [melting], °F	3018

ASTM C-198, Bonding Strength, psi

After 230°F	207
After 2730°F	584

ASTM C-199 - Medium Duty, Pier Test at 2730°F

No flow from joints. No cracks or shrinkage.

#### Application:

Material is ready mixed; surface liquid in pails can be thoroughly mixed in or poured off for desired consistency.

If mortar is frozen, allow pail to thaw at room temperature.

Mortar should be tightly capped as soon as possible, as it will begin setting up once exposed to air.

When laying up firebrick, we recommend a 1/16" to 1/8" joint. Approximately 35-40 lbs. of mortar will lay up one hundred 9"x4½"x2½" striaghts.

Typical set time is between 48 and 72 hours; however, set time can be as long as a few weeks in cool 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 firebrick will also slow the set time. Once all moisture has evaporated, the mortar will finish setting up. Shelf life is 6-12 months, if too stiff for application add water and mix; if dried in container, discard.

SDS AVAILABLE UPON REQUEST

The above properties represent average results of typical data produced from standard ASTM test methods on a 9" straight. Specifications should not be considered guaranteed. Alsey Refractories Company makes every effort to ensure consistency in our products; however, properties may vary due to standard statistical manufacturing deviations. Alsey Refractories Company reserves the right to modify this data at any time without prior notice.

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Alsey Refractories Company  
266 State Route 106 South P O BOX 80  
Alsey IL 62610  
314.963.7900 | info@alsey.com

Manufacturer of Quality Refractories Since 1906