



**ALSEY**  
refractories co.

# PRODUCT DATA

## FLUESET NWS REFRACTORY MORTAR

Dry, hydraulically setting, non-water soluble, medium duty refractory mortar developed for use with firebrick and clay flue tile.

### TYPICAL TEST DATA

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

Silica [SiO <sub>2</sub> ]	43.53
Aluminum Oxide [Al <sub>2</sub> O <sub>3</sub> ]	46.06
Calcium Oxide [CaO]	5.47
Iron Oxide [Fe <sub>2</sub> O <sub>3</sub> ]	1.86
Titanium Dioxide [TiO <sub>2</sub> ]	1.94
Potassium Oxide [K <sub>2</sub> O]	0.59
Magnesium Oxide [MgO]	0.27
Phosphorous Pentoxide [P <sub>2</sub> O <sub>5</sub> ]	0.099
Zirconium Oxide [ZrO <sub>2</sub> ]	0.06
Sodium Oxide [Na <sub>2</sub> O]	0.051
Chromium Trioxide [Cr <sub>2</sub> O <sub>3</sub> ]	0.035
Manganese Oxide [MnO]	0.012
Total	99.98
Loss on Ignition (as received basis; not included in calcined total)	1.43

Size(s): 10lb plastic pail [3A5010]  
50lb bags [3A5050]

Alsey Flue-Set NWS 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 add additives such as fireclay, sand, cement, or other accelerators.

#### PHYSICAL PROPERTIES

ASTM C-24

P.C.E.	29-30
Service Temperature [max. recommended], °F	2700
Temperature Equivalent [melting], °F	3018-3029

ASTM C-198, Bonding Strength, psi

After 230°F	125
After 2450°F	734

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

No flow from joints. No cracks or shrinkage.

- 105 lbs. per ft<sup>3</sup> or approximately 890 in<sup>3</sup> per 50lb bag.

#### Application:

Mix 50lb. bag with 3.75 quarts of clean water or 0.75 quarts per 10 lbs. of dry product until completely blended. A 50lb. bag will yield 60 lbs. of refractory mortar when properly mixed with water.

Complete set time is between 48 and 72 hours; however, only mix what can be utilized within 15 minutes; do not retemper (addition of water after the chemical reaction has begun). The use of warm water will accelerate setup. For best results, please allow seven days before heat is applied. Joint thickness should be thin (1/16"-1/8") for clay flue tile. A thicker joint may be used when laying up firebrick. Approximately 35 to 40 lbs. of prepared mortar will lay up one hundred 9"x4½"x2½" straights.

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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Manufacturer of Quality Refractories Since 1906