

PRODUCT DATA

FLUE-SET NWS REFRACTORY MORTAR

ALSEY Flue-Set Non-Water Soluble Refractory Mortar-- Medium Duty

Description:

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

Sizes:

10lb plastic pail {3A5010}
50lb bags {3A5050}

Uses:

Clay flue tile and firebrick installations--accepted and approved by all national building codes including The International Code Council, The International Residential Building Code and The National Fire Protection Association.

Tuckpointing and patching—large areas may be patched, but when considering length, width and thickness, the smallest dimension of the area to be patched should not exceed 1". If the smallest dimension exceeds 1" then ALSEY Hi-Cast should be used.

Recommended for outdoor fireplaces and barbecue pits if protected from rain for 24 hours.

Application:

Mix 50lb bag with 3.75 quarts of clean water or .75 quarts per 10 lbs of dry product until completely blended. A 50-lb. 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 (the 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 9x4½x2½" straights.

Cautions:

Do not add additives such as fireclay, sand, cement, or other accelerators

TYPICAL TEST DATA -- PHYSICAL PROPERTIES

ASTM C-24

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

ASTM C-198 Bonding Strength

After 230°F, psi 125
After 2450°F, psi 734

ASTM C-199—Medium Duty

Pier Test at 2730°F
No flow from joints. No cracks or shrinkage.

96-97lbs per cubic foot or approximately 890 in³ per 50lb bag

Typical Chemical Analysis, wt. % (calcined basis)

Silica (SiO ₂)	43.53
Aluminum Oxide (Al ₂ O ₃)	46.06
Calcium Oxide (CaO)	5.47
Iron Oxide (Fe ₂ O ₃)	1.86
Titanium Dioxide (TiO ₂)	1.94
Potassium Oxide (K ₂ O)	0.59
Magnesium Oxide (MgO)	0.27
Phosphorous Pentoxide (P ₂ O ₅)	0.099
Zirconium Oxide (ZrO ₂)	0.06
Sodium Oxide (Na ₂ O)	0.051
Chromium Trioxide (Cr ₂ O ₃)	0.035
Manganese Oxide (MnO)	0.012

Total 99.98

Loss on Ignition..... 1.43
(As received basis; not included in calcined total.)

An MSDS is available upon request

Contact:

Alsey Refractories Company
ph: 314-963-7900 info@alsey.com
fax: 314-963-7973 www.alsey.com