

HI-CAST 45 REFRACTORY CASTABLE

ALSEY Hi-Cast 45 2700°F Refractory Castable

Description:

Dry, hydraulic setting, high duty refractory castable.

Sizes:

- 55lb bag [3A3055]
- 3000lb supersack [3A3300]

HI-CAST 45 is a general purpose 2700°F castable effective for most standard operating service conditions.

Application:

Recommended water content is 9-12%.
[2.5-3.5 US Quarts / 55lb bag.]

Actual water content may vary depending on job site conditions.

Coverage 55lb sack = .44ft³

Stir dry mix thoroughly and add the correct ratio of water. Return unused portion to the bag. To avoid moisture absorption, store HI-CAST 45 in a cool dry place.

Under normal atmospheric conditions, set will occur 8 to 10 hours after HI-CAST 45 is mixed. Heat can usually be applied after 24 hours; however, starting temperature must be held below the boiling point of water to avoid the formation of steam which will result in excessive cracking, spalling and lower strength.

TYPICAL TEST DATA -- PHYSICAL PROPERTIES



ASTM C-24

P.C.E. 31-31½
 Temperature Equivalent (melting), °F3061-3090
 Service Temperature (max. recommended), °F..... 2700

ASTM C-20 after 2500°F

Apparent Porosity, % 25.9
 Apparent Specific Gravity g/cc..... 2.71
 Bulk Density lb/ft³ 125.2

ASTM C-113 Schedule B % linear

Reheat Change at 2550°F 2.2

ASTM C-133 (4000 lb/min)

Temperature	MOR	Cold Crush
200°F	521	1241
1000°F	266	828
1500°F	187	1110
2000°F	189	714
2500°F	759	2302

TYPICAL CHEMICAL ANALYSIS, Wt. % (calcined basis)

Silica (SiO₂) 46.25
 Aluminum Oxide (Al₂O₃)..... 44.88
 Calcium Oxide (CaO) 4.30
 Titanium Dioxide (TiO₂)..... 1.90
 Iron Oxide (Fe₂O₃) 1.65
 Potassium Oxide (K₂O)..... 0.60
 Magnesium Oxide (MgO)..... 0.32
 Sodium Oxide (Na₂O)..... 0.08
 Total..... 99.98

Loss on Ignition 0.68

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 HI-CAST 60 3000°F Refractory Castable

Description:

Dry, hydraulic setting, 60% alumina refractory castable.

Sizes:

55lb bag [3A3060]

HI-CAST 60 is a general purpose 3000°F castable effective for most standard operating service conditions.

Application:

Recommended water content is 9-12%. [2.5-3.0 US Quarts / 55lb bag].

Actual water content may vary depending on job site conditions.

Coverage 55lb sack = .41ft³

Stir dry mix thoroughly and add the correct ratio of water. Return unused portion to the bag. To avoid moisture absorption, store HI-CAST 60 in a cool dry place.

Under normal atmospheric conditions, set will occur 4 to 8 hours after HI-CAST 60 is mixed. Heat can usually be applied after 24 hours; however, starting temperature must be held below the boiling point of water to avoid the formation of steam which will result in excessive cracking, spalling and lower strength.

TYPICAL TEST DATA -- PHYSICAL PROPERTIES



ASTM C-24

P.C.E..... 36
 Temperature Equivalent (melting), °F 3279
 Service Temperature (max. recommended), °F..... 3000

ASTM C-20

Apparent Porosity (dried), %..... 19.2
 Apparent Specific (dried), g/cc..... 2.84
 Bulk Density lb/ft³ 149.9

ASTM C-113 Schedule G % linear

Reheat Change at 2550°F..... 1.10
 Reheat Change at 3000°F 2.3

ASTM C-133 (4000 lb/min)

Temperature	MOR	Cold Crush	Density
220°F	1136	5574	146.2
1000°F	587	4324	141.3
1500°F	547	4880	141.1
2000°F	627	3249	140.2
2500°F	938	3212	133.0

TYPICAL CHEMICAL ANALYSIS, Wt. % (calcined basis)

Aluminum Oxide (Al₂O₃)..... 59.11
 Silica (SiO₂) 34.77
 Titanium Dioxide (TiO₂) 2.14
 Calcium Oxide (CaO) 2.11
 Iron Oxide (Fe₂O₃) 0.81
 Magnesium Oxide (MgO)..... 0.10
 Other Oxides 0.96
 Total..... 100.00
 Loss on Ignition (%)..... 0.5

SDS available upon request.

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