PRODUCT DATA

HI-CAST 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 = .44ft^3

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), °F 3061-3090
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/ft^3 ..... 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 (SiO_2) 46.25
Aluminum Oxide (Al_2O_3) 44.88
Calcium Oxide (CaO) 4.30
Titanium Dioxide (TiO_2) 1.90
Iron Oxide (Fe_2O_3) 1.65
Potassium Oxide (K_20) 0.60
Magnesium Oxide (MgO) 0.32
Sodium Oxide (Na_20) 0.08
Total 99.98

Loss on Ignition 0.68

MSDS available upon request.

PRODUCT DATA

HI-CAST REFRACTORY CASTABLE

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 = .41ft^3

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/ft^3 ..... 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 (Al_2O_3) 59.11
Silica (SiO_2) 34.77
Titanium Dioxide (TiO_2) 2.14
Calcium Oxide (CaO) 2.11
Iron Oxide (Fe_2O_3) 0.81
Magnesium Oxide (MgO) 0.10
Other Oxides 0.96
Total 100.00

Loss on Ignition (%) 0.5

MSDS available upon request.

PRODUCT DATA

HI-CAST REFRACTORY CASTABLE

ALSEY Hi-Cast LC60 3000°F Refractory Castable

Description:

Dry, hydraulic setting, 60% alumina, low cement refractory castable.

Sizes:

55lb bag [3A3065]

HI-CAST LC60 is a high strength general purpose 3000°F low cement castable effective for most standard operating service conditions.

Application:

Recommended water content is 4.5-5.5%.
[2.2-2.5 US Pints / 55lb bag]

Actual water content may vary depending on job site conditions.

Coverage 55lb sack = 0.35ft^3

Stir dry mix thoroughly and add the correct ratio of water. Mix with a high shear mixer. Return unused portion to the bag. To avoid moisture absorption, store HI-CAST LC60 in a cool dry place.

Under normal atmospheric conditions, set will occur 4 to 8 hours after HI-CAST LC60 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 after 2500°F

Apparent Porosity (dried), % 9.1
Apparent Specific Gravity (dried), g/cc 2.75
Bulk Density lb/ft^3 ..... 156.6

ASTM C-113 Schedule G % linear

Reheat Change at 2550°F 0.59
Reheat Change at 3000°F ..... -0.45

ASTM C-133 (4000 lb/min)

Temperature	MOR	Cold Crush	Density
220°F	1961	8462	156.6
1000°F	2107	8282	154.5
1500°F	2672	9717	154.0
2000°F	4382	>9800*	155.1
2500°F	3633	>9800*	152.0

*Reached equipment limit before crushing

TYPICAL CHEMICAL ANALYSIS, Wt. % (calcined basis)

Aluminum Oxide (Al_2O_3) 59.38
Silica (SiO_2) 36.21
Titanium Dioxide (TiO_2) 2.05
Calcium Oxide (CaO) 1.06
Iron Oxide (Fe_2O_3) 0.79
Magnesium Oxide (MgO) 0.10
Other Oxides 0.41
Total 100.00

Loss on Ignition (%) 2.7

MSDS available upon request.