

# PRODUCT DATA

## HI-CAST REFRACTORY CASTABLE

### ALSEY Hi-Cast 2700°F Refractory Castable

**Description:**

Dry, hydraulic setting, high duty refractory castable.

**Sizes:**

- 50lb bag {3A3050}
- 3000lb supersack {3A3300}

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

**Application:**

|                       | Water              | Dry Hi Cast |
|-----------------------|--------------------|-------------|
| <b>Tamping</b>        | 9-10 pints (U.S.)  | 100 lbs     |
| <b>Cast Vibrating</b> | 12-14 pints (U.S.) | 100 lbs     |
| <b>Puddling</b>       | 14-20 pints (U.S.) | 100 lbs     |

Coverage 50lb sack = .4ft<sup>3</sup>

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

Under normal atmospheric conditions, set will occur 8 to 10 hours after HI-CAST 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

ASTM C-20 after 2500°F

Apparent Porosity, % ..... 25.9  
 Apparent Specific Gravity g/cc ..... 2.71  
 Bulk Density lb/ft<sup>3</sup> ..... 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 |
|---------------|-----|------------|
| <b>200°F</b>  | 521 | 1241       |
| <b>1000°F</b> | 266 | 828        |
| <b>1500°F</b> | 187 | 1110       |
| <b>2000°F</b> | 189 | 714        |
| <b>2500°F</b> | 759 | 2302       |

### TYPICAL CHEMICAL ANALYSIS, Wt. % (calcined basis)

Silica (SiO<sub>2</sub>) ..... 46.25  
 Aluminum Oxide (Al<sub>2</sub>O<sub>3</sub>) ..... 44.88  
 Calcium Oxide (CaO) ..... 4.30  
 Titanium Dioxide (TiO<sub>2</sub>) ..... 1.90  
 Iron Oxide (Fe<sub>2</sub>O<sub>3</sub>) ..... 1.65  
 Potassium Oxide (K<sub>2</sub>O) ..... 0.60  
 Magnesium Oxide (MgO) ..... 0.32  
 Sodium Oxide (Na<sub>2</sub>O) ..... 0.08  
  
 Total ..... 99.98  
  
 Loss on Ignition ..... 0.68  
 Service Temperature (max. recommended), °F ..... 2700

An MSDS is available upon request

**Contact:**

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