

# KAST-O-LITE® 19 L PLUS



## Product Data

3/2023: 5461

### Description: 1900°F Insulating Castable

- Features:
- Outstanding low density and very low thermal conductivity.
  - Superior to refractory block insulation because it can conform to a complex shell and fill intricate voids.
- Uses:
- Backup lining behind other refractories
  - Working lining in ductwork for hot gas only.

### Chemical Analysis: Approximate (Calcined Basis)

|   |       |
|---|-------|
| Silica (SiO <sub>2</sub> )                    | 27.9% |
| Alumina (Al <sub>2</sub> O <sub>3</sub> )     | 31.6% |
| Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )  | 6.9%  |
| Titania (TiO <sub>2</sub> )                   | 1.8%  |
| Lime (CaO)                                    | 18.6% |
| Magnesia (MgO)                                | 10.7% |
| Alkalies (Na <sub>2</sub> O+K <sub>2</sub> O) | 2.5%  |

| Physical Data (Typical)     | Poured  |
|-----------------------------|---|
| Maximum Service Temperature | 1900°F (1040°C)                                 |
| Material Required           | 21 lb/ft <sup>3</sup> (0.34 g/cm <sup>3</sup> ) |
| Bulk Density                | lb/ft <sup>3</sup> (g/cm <sup>3</sup> )         |
| After 230°F (110°C)         | 26 (0.42)                                       |
| After 1500°F (816°C)        | 21 (0.34)                                       |
| Modulus of Rupture          | lb/in. <sup>2</sup> (MPa)                       |
| After 220°F (105°C)         | 25 (0.17)                                       |
| After 1000°F (538°C)        | 13 (0.09)                                       |
| After 1500°F (816°C)        | 20 (0.14)                                       |
| After 1800°F (982°C)        | 20 (0.14)                                       |
| Cold Crushing Strength      | lb/in. <sup>2</sup> (MPa)                       |
| After 220°F (105°C)         | 45 (0.31)                                       |
| After 1000°F (538°C)        | 30 (0.20)                                       |
| After 1500°F (816°C)        | 40 (0.28)                                       |
| After 1800°F (982°C)        | 40 (0.28)                                       |
| Permanent Linear Change     |   |
| After 220°F (105°C)         | -0.1%   |
| After 1000°F (538°C)        | -0.4%   |
| After 1500°F (816°C)        | -0.6%   |
| After 1800°F (982°C)        | -1.6%   |
| Thermal Conductivity        | Btu·in/hr·ft <sup>2</sup> ·°F (W/m·°C)          |
| At 600°F (316°C)            | 1.4 (0.20)                                      |
| At 800°F (427°C)            | 1.3 (0.19)                                      |
| At 1000°F (538°C)           | 1.3 (0.19)                                      |
| At 1200°F (649°C)           | 1.4 (0.20)                                      |

Note: The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.

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## Product Data

| Mixing and Using Instructions (Water calculated at 8.337 lb/gallon) | 25 lb bag | 500 lb bag | 750 lb bag |
|---|-----------|------------|------------|
| Water Required—Hand Casting/Pouring (Weight 170.0%)                 |           |            |            |
| Pounds  | 42.5      | 850.0      | 1,275.0    |
| Gallons   | 5.1       | 102.0      | 152.9      |
| Liters  | 19.3      | 385.2      | 577.8      |

For detailed mixing and using instructions, contact your HWI representative or visit [www.thinkHWI.com](http://www.thinkHWI.com).

**Mixing Time: Typically two (2) minutes at most is best, but not more than three (3) minutes. Add 70-80% of water to mixer before adding dry material.**

Working Time 15 minutes

### Heatup/Dryout Schedule

See HWI Dryout Schedule 4—PLUS Lightweight Castables and Gunning Castables.

### Installation Guidelines

See HWI Installation Guidelines IC-1—Insulating Castables—Standard.

Shelf Life (Under Proper Storage Conditions) 365 days