

KAST-O-LITE® 97 L PLUS



Product Data

3/2021: 5485

Description: 3300°F Insulating Castable

- Features:
- Contains bubble alumina for high strength and moderate density.
 - Has a very low silica content to resist detrimental hydrogen atmospheres.
- Uses:
- Secondary ammonia reformer backup linings.
 - Carbon black reactor backup linings and very high temperature backup linings.
 - Waste heat boiler tube sheets.
 - Controlled atmosphere furnace linings.

Chemical Analysis: Approximate (Calcined Basis)

Silica (SiO ₂)	0.3%
Alumina (Al ₂ O ₃)	94.0%
Lime (CaO)	5.1%
Alkalies (Na ₂ O+K ₂ O)	0.3%

Physical Data (Typical)	Hand Cast
Maximum Service Temperature	3300°F (1815°C)
Material Required	84 lb/ft ³ (1.35 g/cm ³)
Bulk Density	lb/ft ³ (g/cm ³)
After 230°F (110°C)	95 (1.52)
After 1500°F (816°C)	84 (1.35)
After 2910°F (1600°C)	82 (1.31)
Modulus of Rupture	lb/in. ² (MPa)
After 230°F (110°C)	600 (4.1)
After 1500°F (816°C)	300 (2.1)
After 2910°F (1600°C)	1,350 (9.3)
Cold Crushing Strength	lb/in. ² (MPa)
After 230°F (110°C)	2,000 (13.8)
After 1500°F (816°C)	1,400 (9.7)
After 2910°F (1600°C)	2,250 (15.5)
Permanent Linear Change	
After 1500°F (816°C)	-0.1%
After 2910°F (1600°C)	-0.3%
Thermal Conductivity	Btu·in/hr·ft ² ·°F (W/m·°C)
At 400°F (205°C)	11.0 (1.59)
At 800°F (425°C)	6.6 (0.95)
At 1200°F (649°C)	5.5 (0.79)
At 1600°F (871°C)	5.5 (0.79)
At 1800°F (982°C)	5.6 (0.81)

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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Mixing and Using Information (Water calculated at 8.337 lb/gallon)	55 lb bag	1000 lb bag	1500 lb bag
Water Required—Hand Casting/Pouring (Weight 15.0%)			
Pounds	8.3	150.0	225.0
Gallons	1.0	18.0	27.0
Liters	3.7	68.0	102.0

****DO NOT exceed 17.0% water under any circumstances**

For detailed mixing and using instructions, contact your HWI representative or visit www.thinkHWI.com.

Heatup/Dryout Schedule

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

Installation Guidelines

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

Shelf Life (Under Proper Storage Conditions) 365 days