



PRODUCT DATA

Brand Name: PERMACON® 95

Description: PERMACON® 95 is an ultra-low cement, 95% alumina castable, designed for severe service conditions at temperatures up to 3300°F. It offers superior resistance to spalling, cracking, impact, and abrasion; and greater resistance to chemical attack than low cement or conventional castables.

Physical properties shown are average values of samples taken under controlled conditions
ASTM test methods used where applicable

Maximum Service Temperature: 3300°F (1816°C)

Dry Material Required per Cubic Foot : 186 lbs. (approximate)

Typical Water Required for Mixing (by weight) :

Casting 3.0 to 4.0%

Cast Data

Bulk Density (pcf)

After 220°F (104°C)	182 - 192	(2.92 - 3.08 g/cm ³)
After 1500°F (815°C)	189 - 195	(3.03 - 3.12 g/cm ³)
After 2910°F (1600°C)	189 - 195	(3.03 - 3.12 g/cm ³)

Cold Crushing Strength (psi)

After 220°F (104°C)	1200 - 6400	(84 - 448 kg/cm ²)
After 1500°F (815°C)	6100 - 12100	(427 - 847 kg/cm ²)
After 2910°F (1600°C)	18700 - 24700	(1309 - 1729 kg/cm ²)

Modulus of Rupture (psi)

After 220°F (104°C)	500 - 1500	(35 - 105 kg/cm ²)
After 1500°F (815°C)	2100 - 3100	(147 - 217 kg/cm ²)
After 2910°F (1600°C)	4300 - 5300	(301 - 371 kg/cm ²)

Thermal Conductivity (K Factor)

Mean Temperature	BTU/ft ² /hr./°F/inch	W/mK
1000°F (538°C)	24.4	3.52
2000°F (1093°C)	24.2	3.49
3000°F (1649°C)	21.9	3.16

Apparent Porosity (%)

After 1500°F (815°C)	11 - 15
After 2910°F (1600°C)	10 - 14

Permanent Linear Change (%)

After 1500°F (815°C)	-0.8 to -0.2
After 2910°F (1600°C)	-0.6 to 0.0

Typical Chemical Analysis (%)

(Calcined Basis)

Alumina (Al ₂ O ₃)	94.1
Silica (SiO ₂)	4.9
Iron Oxide (Fe ₂ O ₃)	0.2
Titania (TiO ₂)	0.2
Magnesia (MgO)	0.1
Lime (CaO)	0.3
Alkalies (Na ₂ O+K ₂ O)	0.2

Standard Packaging: 55 lb bag. 72 bags per pallet. Bulk packaging available.

Brand Code: 1015

The properties shown on this data sheet represent typical average results using standard ASTM test methods (unless otherwise noted) conducted under controlled condition (using standard rectangular shapes), and should not be considered to be guaranteed specifications. Properties are subject to normal manufacturing statistical standard deviation ranges, and Resco Products, Inc. reserves the right to modify the properties and specifications at any time without prior notice.

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