



PRODUCT DATA

Brand Name:

PUROTAB® COARSE

Description: PUROTAB® COARSE is a specially developed, high alumina (97%), low iron castable. It has superior resistance to carbon monoxide attack due to its extremely low iron content. With its high purity and chemical inertness, oxides and alkalis have little adverse effect. In both ferrous and non-ferrous applications, it resists molten metals and slags. The coarse aggregate improves resistance to thermal shock.

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

Maximum Service Temperature: 3400°F (1871°C)

Typical Water Required for Mixing (by weight) :

Vibration Casting 5.75 - 6.75%
Spade Casting 6.5 - 8.0%

Dry Material Required per Cubic Foot:

Casting 170 - 177 lbs

Bulk Density (pcf)

	Vibration Casting Data		Spade Cast Data	
After 220°F (105°C)	185 - 190	(2.96 - 3.04 g/cm ³)	173 - 180	(2.77 - 2.88 g/cm ³)
After 1500°F (815°C)	180 - 185	(2.88 - 2.96 g/cm ³)	170 - 177	(2.72 - 2.84 g/cm ³)
After 2550°F (1400°C)	179 - 184	(2.87 - 2.95 g/cm ³)	169 - 175	(2.71 - 2.80 g/cm ³)

Cold Crushing Strength (psi)

After 220°F (105°C)	5400 - 11400	(378 - 798 kg/cm ²)	2100 - 3900	(147 - 273 kg/cm ²)
After 1500°F (815°C)	3400 - 9400	(238 - 658 kg/cm ²)	2000 - 3000	(140 - 210 kg/cm ²)
After 2550°F (1400°C)	5800 - 11800	(406 - 826 kg/cm ²)	2100 - 4800	(147 - 336 kg/cm ²)

Modulus of Rupture (psi)

After 220°F (105°C)	1000 - 2000	(70 - 140 kg/cm ²)	1000 - 1400	(70 - 98 kg/cm ²)
After 1500°F (815°C)	800 - 1800	(56 - 126 kg/cm ²)	700 - 900	(49 - 63 kg/cm ²)
After 2550°F (1400°C)	1700 - 2700	(119 - 189 kg/cm ²)	1400 - 2400	(98 - 168 kg/cm ²)

Thermal Conductivity (K Factor)

	BTU/ft ² /hr./°F/inch	W/mK	BTU/ft ² /hr./°F/inch	W/mK
1500°F (815°C)	20.5	2.95	22.1	3.19
2550°F (1400°C)	19	2.74	19.2	2.77

Permanent Linear Change (%)

After 2550°F (1400°C) -0.8 to -0.2 -0.8 to -0.4

Typical Chemical Analysis (%)

(Calcined Basis)

Alumina (Al ₂ O ₃)	97.0
Silica (SiO ₂)	0.1
Lime (CaO)	2.5
Iron Oxide (Fe ₂ O ₃)	0.1
Titania (TiO ₂)	Trace
Magnesia (MgO)	0.1
Alkalies (Na ₂ O+K ₂ O)	0.2

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

Brand Code: 1062

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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