



PRODUCT DATA

Brand Name:

FURNACUBED™ FS

Description: FURNACUBED™ FS is a non-wetting, fused silica-based castable for aluminum contact. It has excellent strength and low porosity with good abrasion resistance. It possesses excellent thermal shock resistance because of a very low reversible coefficient of thermal expansion. The product provides extremely good dross resistance and outstanding resistance to spalling at a reasonably low density.

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

Maximum Service Temperature: 2200 °F (1240°C)

Typical Water Required for Mixing (by weight) :

Vibration Casting	7.0 to 8.0%
Self Flow/Pump Casting	8.0 to 8.5%

Dry Material Required per Cubic Foot:

Vibration Casting	122 - 126
Self Flow/Pump Casting ...	118 - 122

	Vibration Casting Data		Self Flow/Pump Casting Data	
Bulk Density (pcf)				
After 220°F (105°C)	123 - 127	(1.97 - 2.03 g/cm ³)	116 - 126	(1.86 - 2.02 g/cm ³)
After 1500°F (815°C)	122 - 126	(1.95 - 2.02 g/cm ³)	118 - 122	(1.89 - 1.95 g/cm ³)
After 2000°F (1093°C)	123 - 127	(1.97 - 2.03 g/cm ³)	115 - 119	(1.84 - 1.91 g/cm ³)
Cold Crushing Strength (psi)				
After 220°F (105°C)	5000 - 8000	(350 - 560 kg/cm ²)	1600 - 8000	(112 - 560 kg/cm ²)
After 1500°F (815°C)	7000 - 10000	(490 - 700 kg/cm ²)	4000 - 7000	(280 - 490 kg/cm ²)
After 2000°F (1093°C)	8500 - 11500	(595 - 805 kg/cm ²)	5000 - 8000	(350 - 560 kg/cm ²)
Modulus of Rupture (psi)				
After 220°F (105°C)	1200 - 1600	(84 - 112 kg/cm ²)	1000 - 1400	(70 - 98 kg/cm ²)
After 1500°F (815°C)	1200 - 1600	(84 - 112 kg/cm ²)	1000 - 1600	(70 - 112 kg/cm ²)
After 2000°F (1093°C)	1200 - 1600	(84 - 112 kg/cm ²)	1200 - 1600	(84 - 112 kg/cm ²)
Thermal Conductivity (K Factor)	<u>BTU/ft²/hr/°F/inch</u>	<u>W/mK</u>	<u>BTU/ft²/hr/°F/inch</u>	<u>W/mK</u>
After 1500°F (815°C)	-----	-----	9.8	1.41
After 2000°F (1093°C)	-----	-----	12.1	1.75
Apparent Porosity (%)				
After 220°F (105°C)	8 - 10		11 - 13	
After 1500°F (815°C)	9 - 11		12 - 14	
Permanent Linear Change (%)				
After 1500°F (815°C)	-0.4 to 0.0		-0.4 to 0.0	
After 2000°F (1093°C)	-0.5 to 0.0		-0.6 to -0.2	

Typical Chemical Analysis (%)

(Calcined Basis)

Silica (SiO ₂)	87.8
Alumina (Al ₂ O ₃)	11.0
Lime (CaO)	1.1
Iron Oxide (Fe ₂ O ₃)	Trace
Titania (TiO ₂)	Trace
Magnesia (MgO)	Trace
Alkalis (Na ₂ O+K ₂ O)	0.1

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

Brand Code: 0880

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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