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Technical Data Sheet

Plicast HyMOR SiC 85/12V KK

Product # 3301

Available Internationally As: Plico Castable LC SiC 85/12V KK

Product Description:

Plicast® HyMOR® SiC 85/12V KK is a high alumina, low cement castable containing 12% silicon carbide. The low cement technology admixtures that when combined with vibration casting installation methods allows for water reduction. This yields higher densities, lower porosity, and better physical attributes. The addition of silicon carbide provides slag resistance in steel applications.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 2800 °F 1700 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 187 pcf 2964 kg/m³

Bulk Density - To Place: 187 pcf 2964 kg/m³

Minimum Time To Firing: 16 hr

Abrasion Loss after 1500°F / 815°C
per ASTM C704

N/A cc

Chemistry (calcined) %					
Al ₂ O ₃	84.9	Alk	0.4	MgO	
SiO ₂	0.3	TiO ₂		ZrO ₂	
CaO	1.7	P ₂ O ₅		Other	
Fe ₂ O ₃		SiC	12.7		

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min	4.3	1.1	1.1
	max	5.3	1.4	1.3
Casting	min			
	max			
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

5.0 x 10⁻⁶ in/in/°F / 9.0 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	22.0	3.17
1000°F / 540°C	21.0	3.02
1500°F / 815°C	21.0	3.02
2000°F / 1090°C	22.0	3.17

Temperature		Linear Change% per ASTM C113	CCS per ASTM C133		Cold MOR per ASTM C133		Hot MOR per ASTM C583	
°F	°C		psi	MPa	psi	MPa	psi	MPa
230	110	0.0	8500	59.0	2600	17.9		
2000	1090	0.7			1200	8.3	1300	9.0
2500	1370	0.8			3400	23.4	700	4.8
2700	1480							
3000	1650							

Other Data:

Release Date: Nov 1, 2023

Heat Up Guide: Schedule C or C-Linear

ASTM Class: C 401 Class G

Low Cement Castable

Refractory material should be stored in a cool, dry environment.

Note: All data are averaged results of ASTM tests (where applicable) on laboratory specimens. Reasonable variations in data can be expected. Data is not to be used for specification purposes. Product data is periodically updated to reflect product, raw material, process and/or testing changes. Please consult your Plibrico representative to make sure you have the most current data.