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Technical Data Sheet Redline Redcast 45

Product # 52101

Available Internationally As:

Redline Redcast 45

Product Description:

A high strength, first quality, low cement castable designed for moderate to severe service conditions. Applications include forge and heat treating furnaces, homogenizing furnace pads, small aluminum furnace roofs and upper sidewalls, kiln car tops.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 2800 °F 1540 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 145 pcf 2323 kg/m³

Bulk Density - To Place: 145 pcf 2323 kg/m³

Minimum Time To Firing: 24 hr

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

N/A cc

Chemistry (calcined) %					
Al ₂ O ₃	47.4	Alk	0.4	MgO	0.2
SiO ₂	46.4	TiO ₂	1.6	ZrO ₂	
CaO	1.6	P ₂ O ₅		Other	
Fe ₂ O ₃	1.1	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min	5.5	1.5	1.4
	max			
Casting	min	5.5	1.5	1.4
	max			
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

x 10⁻⁶ in/in/°F / x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	9.6	1.38
1000°F / 540°C	10.4	1.50
1500°F / 815°C	11.0	1.58
2000°F / 1090°C	11.5	1.66

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
250	120	0.0	7900	54.0	1800	12.4		
1000	540	-0.1			1700	11.7		
1500	820	-0.2			2175	15.0		
2000	1090	-0.3			2700	18.6		
2800	1540	0.4			3050	21.0		

Other Data:

Release Date: 1 Jun 1998

Heat Up Guide: Redline Schedule 1

ASTM Class: C 401 Class E

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.