



# Plibrico Company, LLC

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# Technical Data Sheet Redline Redphos 70A Fine

Product # 59001

Available Internationally As:

Redline Redphos 70A Fine

### Product Description:

A fine grained, phosphate bonded, high purity mullite patching plastic. It is designed for patching existing refractory surfaces in molten aluminum contact applications. This material provides excellent non-wetting properties and resistance to metal penetration.

**Standard Packaging:** 60 # / 27 kg Pail

**Shelf Life:** 4 months

**Service Limit:** 3100 °F 1700 °C

**Contact Limit:** 1700 °F 927 °C

**Bulk Density - In Service:** 164 pcf 2627 kg/m<sup>3</sup>

**Bulk Density - To Place:** 164 pcf 2627 kg/m<sup>3</sup>

**Minimum Time To Firing:** 0 hr

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

N/A cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	68.7	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	24.9	TiO <sub>2</sub>	1.3	ZrO <sub>2</sub>	
CaO		P <sub>2</sub> O <sub>5</sub>	3.3	Other	
Fe <sub>2</sub> O <sub>3</sub>	0.9	SiC			

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

### Coefficient of Thermal Expansion (reversible):

$\times 10^{-6}$  in/in/°F /  $\times 10^{-6}$  mm/mm/°C

Thermal Conductivity	btu*in/hr*ft <sup>2</sup> *°F	W/m°C
500°F / 260°C	8.1	1.17
1000°F / 540°C	8.3	1.20
1500°F / 815°C	9.1	1.31
2000°F / 1090°C	10.5	1.51

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	-0.5			950	6.6		
1000	540	-0.5			1600	11.0		
1500	820	-0.6			1350	9.3		
2000	1090	-0.6			1400	9.7		
2500	1370	0.2			2100	14.5		

Other Data:

Release Date: 1 Jun 1998

Heat Up Guide: Redline Schedule 2

ASTM Class: C 673 70% Alumina  
 Plastic Refractory

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.