

PRODUCT BULLETIN



**MATRIX
REFRACTORIES**
A Division of
ALLIED MINERAL
PRODUCTS, INC.

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MATRIPHOS 85AC

General Information

MATRIPHOS 85AC is a high alumina, phosphate bonded plastic refractory. This product exhibits high strength throughout its application temperature range. The inherent high density and low porosity reduces metal penetration and attack. MATRIPHOS 85AC offers the following features and benefits:

- > Non-wetting to aluminum and its alloys
- > Firm ramming properties which are ideal for furnace construction and maintenance
- > Optimized grain size distribution resulting in a high rammed density

Technical Data

Chemical Analysis

(Major Components)

Al ₂ O ₃	80.7%
SiO ₂	12.2%
TiO ₂	2.4%
P ₂ O ₅	2.7%

Material Required	2.80 g/cm ³ (175 lb./ft. ³)
Grain Size	5 mm (4 mesh)
Maximum Practical Use Temperature	1650°C (3000°F)
Installation Method	Pneumatic Ram or Hand Tamp

Packaged in 25 kg (55-lb.) cartons protected with stretch film. In order to maintain optimal workability characteristics, storage beyond 6 months is not recommended. Store in a cool, dry location. Keep from freezing.

MATRIX REFRACTORIES DIVISION supplies a complete line of monolithic refractories for the metals industry. For more information or a complete evaluation of your refractory requirements, please contact your local MATRIX REFRACTORIES DIVISION representative.

Warning: Contains aluminum oxide, aluminosilicates, silica, and phosphoric acid. The International Agency for Research on Cancer (IARC) has classified crystalline silica inhaled in the form of quartz or cristobalite carcinogenic to humans. Refer to Material Safety Data Sheet for additional information and disposal instructions. Avoid eye and skin contact. Product may cause skin and eye irritation. Wear protective gloves and safety goggles. Wear NIOSH approved respirator during installation, removal, and disposal of product to prevent inhalation of dust. In case of eye contact, flush immediately and repeatedly with water and consult a physician. Steam spalling, which can lead to personal injury, may result from improper drying and firing procedures. For safest use and optimum performance, proper practices must be followed.

MXMPHOS85AC

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Allied Mineral Products, Inc.

THE INFORMATION STATED IS BASED ON THE BEST LABORATORY AND LITERATURE DATA AND IS NOT A WARRANTY OR A GUARANTEE, NOR A VIOLATION OF ANY PATENT. IT IS PRESENTED FOR CONSIDERATION AND VERIFICATION ONLY, AND IS NOT TO BE USED FOR SPECIFICATION PURPOSES.

LABORATORY TEST BAR DATA

MATRIPHOS 85AC

<u>Permanent Linear Change</u>	<u>%</u>
After heating to:	
760°C (1400°F)	0
980°C (1800°F)	0
1093°C (2000°F)	0.1
1315°C (2400°F)	0.3
1480°C (2700°F)	1.0

<u>Density</u>	<u>g/cm³</u>	<u>kg/m³</u>	<u>pcf</u>
After heating to:			
760°C (1400°F)	2.48	2480	155
980°C (1800°F)	2.45	2450	153
1093°C (2000°F)	2.46	2460	154
1315°C (2400°F)	2.39	2390	149
1480°C (2700°F)	2.36	2360	147

<u>Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After heating to:			
760°C (1400°F)	5.0	51	730
980°C (1800°F)	8.3	84	1200
1093°C (2000°F)	9.1	93	1320
1315°C (2400°F)	8.7	89	1260
1480°C (2700°F)	7.9	81	1150



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