PRODUCT BULLETIN

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MATRIX REFRACTORIES
A Division of
ALLIED MINERAL PRODUCTS, INC.

MATRIPHOS 70AC

General Information

MATRIPHOS 70AC is a high purity mullite based refractory plastic with a phosphate bonding system which provides for high strengths. Designed for metal contact applications in aluminum melting and holding equipment, it provides excellent non-wetting properties as well as resistance to metal penetration. Its consistency is ideal for large scale construction. MATRIPHOS 70AC offers the following features and benefits:

> Non-wetting to aluminum alloys
> High strength
> Excellent workability

Technical Data

Chemical Analysis

(Major Components)	
Al_2O_3	73.0%
SiO_2	19.7%
TiO_2	2.5%
P_2O_5	2.1%
Fe_2O_3	1.2%

Material Required	2.59 g/cm^3 (162 lb./ft.^{3})
Grain Size	5 mm (4 mesh) and finer
Maximum Use Temperature	1650°C (3000°F)
Installation Method	Pneumatic ram or hand tamp

Packaged in 25. kg (55-lb.) cartons with plastic liners. Palletized 60 cartons (1500 kg or 3300 lb.) per 36" x 48" pallet, protected with stretch wrap. Storage beyond 6 months is not recommended. Protect from freezing.

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

Warning: Contains phosphoric acid, aluminum oxide, aluminuosilicates, and silica. 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.

(MXMPHOS70AC)
Revised 6/28/06

Laboratory Test Bar Data

MATRIPHOS 70AC

Permanent Linear Change	**%**
After heating to:	
120°C (250°F)	-0.3
815°C (1500°F)	-0.4
1095°C (2000°F)	-0.6
1370°C (2500°F)	-0.1
1650°C (3000°F)	0.5

Modulus of Rupture	**MPa**	**kg/cm^2**	**psi**
After heating to:			
120°C (250°F)	6.9	70.3	1000
815°C (1500°F)	8.3	84.4	1200
1095°C (2000°F)	10.3	105.5	1500
1370°C (2500°F)	15.9	161.7	2300
1650°C (3000°F)	24.8	253.2	3600

Hot Modulus of Rupture	**MPa**	**kg/cm^2**	**psi**
(ASTM-583)			
815°C (1500°F)	24.7	252.2	3586

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