

PRODUCT BULLETIN

2700 Scioto Parkway Columbus, Ohio 43221 USA 614/876-0244 Fax: 614/876-0981
www.alliedmineral.com



**ALLIED
MINERAL**
PRODUCTS, INC.

MATRIFLO 85ACX

General Information

MATRIFLO 85ACX is a high alumina, low cement castable. MATRIFLO 85ACX exhibits high strengths and exceptional resistance to molten aluminum-based alloys and salt fluxes due to its relatively low free silica content and the addition of non-wetting inhibitors. MATRIFLO 85ACX is specifically designed for aluminum contact applications, such as aluminum furnace lower sidewalls, hearths and belly band areas. This product offers the following benefits and features:

- > Superior resistance to aluminum attack
- > High Strength
- > Excellent non-wetting properties
- > Resistant to salt flux

Technical Data

Chemical Analysis

(Major Components)*

Al ₂ O ₃	85.6%	Material Required.....	2.74 g/cm ³ (172 lb./ft. ³)
SiO ₂	8.5%	Grain Size	8 mm (5/16 inch) and finer
TiO ₂	2.4%	Maximum Use.....	1540°C (2800°F)
CaO	2.3%	Installation Method	Casting/Vibration
Fe ₂ O ₃	0.8%		

* Proprietary ingredients not listed.

Packaged in 25 kg (55-lb.) multi-wall paper bags, protected with stretch wrap. Also available in bulk packaging. Storage beyond 6 months is not recommended. Store in a dry location to avoid moisture pickup.

Hydraulic Set

Water Required:	5.9% (1.47 liters/25 kg or 3.11 pints/55 lb.)
Working Time:	up to 1 hour
Initial Set:	2 – 5 hours
Final Set:	4 – 12 hours

Allied Mineral Products, Inc. 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 Allied representative.

Warning: Contains aluminum oxide, aluminosilicates, cement, 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 breathing dust. Wear NIOSH approved respirator during installation, removal, and disposal of product to prevent inhalation of dust. Avoid contact with skin and eyes. Cement powder or freshly mixed castable may cause eye and skin irritation. Steam spalling, which can lead to personal injury, may result from improper drying and firing procedures. In case of eye contact, flush immediately and repeatedly with water and consult a physician. For safest use and optimum performance, proper practices must be followed.

(MXMF85ACX)

08/23/10

© 2010 Allied Mineral Products, Inc.

Laboratory Test Bar Data

MATRIFLO 85ACX

<u>Permanent Linear Change</u>	<u>%</u>		
After heating to:			
816°C (1500°F)	-0.2		
1093°C (2000°F)	-0.2		
1371°C (2500°F)	-1.1		

<u>Density</u>	<u>g/cm³</u>	<u>kg/m³</u>	<u>pcf</u>
After heating to:			
110°C (230°F)	2.76	2760	172
816°C (1500°F)	2.74	2740	171
1093°C (2000°F)	2.70	2700	169
1371°C (2500°F)	2.78	2780	174

<u>Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After heating to:			
110°C (230°F)	12.4	127	1800
816°C (1500°F)	12.5	128	1820
1093°C (2000°F)	12.5	127	1810
1371°C (2500°F)	33.1	337	4800

<u>Cold Crushing Strength</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After heating to:			
110°C (230°F)	70.3	717	10200
816°C (1500°F)	74.5	759	10800
1093°C (2000°F)	84.1	858	12200
1371°C (2500°F)	142	1448	20600

<u>Abrasion Loss</u>	<u>cm³</u>		
After heating to:			
816°C (1500°F)	5.8		
1000°C (1832°F)	4.4		

<u>Hot Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
At:			
816°C (1500°F)	24.1	246	3500
1093°C (2000°F)	18.3	186	2650



**ALLIED
MINERAL**
PRODUCTS, INC.

2700 Scioto Parkway
Columbus, Ohio 43221 USA
614-876-0244
Fax: 614-876-0981
www.alliedmineral.com
Email: allied@alliedmin.com