

PRODUCT BULLETIN

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



**ALLIED
MINERAL**
PRODUCTS, INC.

MATRICAST 70AC

General Information

MATRICAST 70AC is a high purity, mullite-based, castable refractory designed for use in the most severe aluminum contact applications. This product has excellent volume stability and strength at aluminum melting temperatures. MATRICAST 70AC offers the following benefits and features:

- > Superior hot strength
- > Excellent abrasion resistance
- > Excellent aluminum non-wetting properties

Technical Data

Chemical Analysis*

(Major Components)

Al ₂ O ₃	69.1%
SiO ₂	25.1%
TiO ₂	2.0%
CaO	2.2%
Fe ₂ O ₃	0.9%

Material Required	2.67 g/cm ³ (167 lb/ft ³)
Grain Size.....	5 mm (4 mesh) and finer
Maximum Application Temperature	1540°C (2800°F)
Installation Method	Casting/Vibration

*Proprietary ingredients not included.

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

Hydraulic Set and Water Requirements

Water Required:	5.25%
Working Time:	up to 1 hour
Initial Set:	3 – 8 hours
Final Set:	5 – 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. Hydrogen gas may be generated when product is exposed to water. Ignition of hydrogen gas in an enclosed area can lead to personal injury. Proper ventilation should be supplied to avoid gas buildup. For safest use and optimum performance, proper practices must be followed.

(MXMC70AC)
Revised 7/21/14

© 2014 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

MATRICAST 70AC

<u>Permanent Linear Change</u>	<u>%</u>
After heating to:	
110°C (230°F)	-
815°C (1500°F)	-0.20
1090°C (2000°F)	0.30
1370°C (2500°F)	0.70

<u>Density</u>	<u>g/cm³</u>	<u>kg/m³</u>	<u>pcf</u>
After heating to:			
110°C (230°F)			
815°C (1500°F)	2.68	2680	167
1090°C (2000°F)	2.68	2680	167
1370°C (2500°F)	2.65	2650	165
	2.62	2620	163

<u>Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After heating to:			
110°C (230°F)	19.82	202.14	2875
815°C (1500°F)	28.24	287.91	4095
1090°C (2000°F)	29.44	300.22	4270
1370°C (2500°F)	35.79	364.90	5190

<u>Hot Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
At: 815°C (1500°F)	38.61	393.73	5600

<u>Abrasion Loss</u>	<u>cm³</u>
After heating to:	
110°C (230°F)	5.6
815°C (1500°F)	4.3



**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