

PRODUCT BULLETIN

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MATRIX
REFRACTORIES
A Division of
ALLIED MINERAL
PRODUCTS, INC.

MATRILITE 24AC

General Information

MATRILITE 24AC is a non-wetting insulating castable designed for service at intermediate temperatures. It is ideal for back-up linings in aluminum and other non-ferrous holding furnaces. MATRILITE 24AC offers the following benefits and features:

- > Non-wetting properties resist metal saturation
- > Designed for non-ferrous melting operations
- > Excellent insulating properties

Technical Data

Chemical Analysis

(Major Components)

Al ₂ O ₃	41.8%	Material Required	1.23 g/cm ³ (77 lbs./ft. ³)
SiO ₂	39.3%	Grain Size	5 mm (4 mesh) and finer
CaO	11.8%	Maximum Use Temperature	1345°C (2450°F)
Fe ₂ O ₃	2.7%	Casting Water	33-34% (8.4 liters/25 kg or 9.0 quarts/55 lbs.)
TiO ₂	2.6%	Time Before Firing (minimum)	24 hours

Packaged in 25 kg (55-lb.) multi-wall paper bags, protected with stretch wrap. Also available in bulk packaging. Storage beyond 24 months is not recommended. Store in a dry location to avoid moisture pickup.

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

Warning: Contains aluminum oxide, aluminosilicate, 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.

(MXML24AC)

3/19/14

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Allied Mineral Products, Inc.

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Laboratory Test Bar Data

MATRILITE 24AC

<u>Permanent Linear Change</u>	<u>%</u>
After heating to:	
230°F (110°C)	-0.15
1750°F (955°C)	-0.55
2400°F (1315°C)	-1.25

<u>Density</u>	<u>pcf</u>	<u>g/cm³</u>	<u>kg/m³</u>
After heating to:			
230°F (110°C)	78	1.25	1250
1750°F (955°C)	75	1.20	1200
2400°F (1315°C)	76	1.22	1220

<u>Modulus of Rupture</u>	<u>psi</u>	<u>MPa</u>	<u>kg/cm²</u>
After heating to:			
230°F (110°C)	340	2.34	23.9
1750°F (955°C)	280	1.93	19.7
2400°F (1315°C)	800	5.52	56.3

<u>Thermal Conductivity (ASTM C-1113)</u>	<u>Btu-in/hr-ft²-°F</u>	<u>W/mK</u>
500°F (260°C)	2.2	0.32
1000°F (540°C)	2.3	0.33
1500°F (815°C)	2.6	0.37
2000°F (1090°C)	3.5	0.50



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