

PRODUCT BULLETIN

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MATRIX
REFRACTORIES
A Division of
ALLIED MINERAL
PRODUCTS, INC.

QUICK CAST[®] 62

General Information

QUICK CAST[®] 62 is part of a complete family of products that offer a wide range of installation methods: pumping, pouring, shotcreting or vibrating. QUICK CAST 62 is a mullite-based low cement castable designed for applications including upper sidewalls, jambs, and roofs in aluminum melting and holding furnaces. Other applications include, forge and heat treating furnaces, kiln car tops, rotary cement kiln linings, ladles, covers, coreless furnace rings, non-ferrous uppercases, and launders. For more severe applications, the QUICK CAST family includes QUICK CAST 72 and QUICK CAST 82. QUICK CAST 62 offers the following features and benefits:

- > Excellent hot strengths
- > Tolerates a wide water range without sacrificing physical properties
- > Excellent abrasion resistance
- > Resistant to thermal shock

Technical Data

Chemical Analysis

(Major Components)

Al ₂ O ₃	66.1%
SiO ₂	27.2%
CaO	2.1%
TiO ₂	2.4%
Fe ₂ O ₃	1.2%

Material Required	2.64 g/cm ³ (165 lb./ft. ³)
Grain Size	7 mm (3 mesh) and finer
Maximum Practical Use Temperature	1705°C (3100°F)
Installation Method	Self-flow, Pouring, Vibrated, and Shotcreting

Packaged in 25 kg (55-lb.) multi-wall paper bags. Palletized 64 bags (1600 kg or 3520 lb.) per 42" x 42" pallet, 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 and Water Requirements

QUICK CAST 62 has a unique design, enabling the installer to adjust water levels for optimum casting behavior. This product can be installed at a water level between 5.4% and 7.1%.

	<u>Vibrated</u>	<u>Pouring and Pumping</u>	<u>Self-flow</u>
Water Required:	5.4%	6.0%	7.1%
Working Time:	40 minutes	50 minutes	>60 minutes
Initial Set:	2-6 hours	2-6 hours	2-6 hours
Final Set:	8-24 hours	12-24 hours	16-24 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, calcium aluminate cement, aluminosilicates, 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.

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LABORATORY TEST BAR DATA

QUICK CAST[®] 62

Casting Water 6.65%

<u>Density</u>	<u>g/cm³</u>	<u>kg/m³</u>	<u>pcf</u>
After firing to:			
110°C (230°F)	2.58	2579	161
815°C (1500°F)	2.53	2530	158
1090°C (2000°F)	2.55	2547	159
1370°C (2500°F)	2.50	2499	156

<u>Modulus Of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After firing to:			
110°C (230°F)	17.9	182.8	2600
815°C (1500°F)	18.2	185.7	2640
1090°C (2000°F)	25.1	256.3	3645
1370°C (2500°F)	30.0	305.6	4345

<u>Hot Modulus Of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
At: 815°C (1500°F)	34.5	351.6	5000

<u>Permanent Linear Expansion</u>	<u>%</u>
After firing to:	
815°C (1500°F)	-0.19
1090°C (2000°F)	-0.30
1370°C (2500°F)	-0.33

<u>Apparent Porosity</u>	<u>%</u>
After firing to:	
110°C (230°F)	9.6
815°C (1500°F)	14.2
1090°C (2000°F)	13.1
1370°C (2500°F)	13.2



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