

# PRODUCT BULLETIN

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

www.alliedmineral.com



## QUICK-FIRE® 90

### General Information

QUICK-FIRE® 90 is a high alumina, two component castable that can be used to repair existing linings or cast in place as a new lining. QUICK-FIRE® 90 can be used in either metal or non-metal contact applications. This product is non-wetting to aluminum and may be used in select ferrous and non-ferrous applications. QUICK-FIRE® 90 utilizes a two component refractory system that incorporates a dry refractory aggregate and a proprietary liquid binder, QUICK-BOND.

<u>Chemical Analysis</u>		Maximum Application Temperature	1700°C (3100°F)
Al <sub>2</sub> O <sub>3</sub>	89.2%	Material Required	2.90 g/cm <sup>3</sup> (181 lb/ft <sup>3</sup> )
P <sub>2</sub> O <sub>5</sub>	3.7%	Grain Size	3.5 mm (6 mesh) and finer
TiO <sub>2</sub>	2.5%	Installation Method	Vibration cast, see QUICK-FIRE® installation guide
SiO <sub>2</sub>	2.1%	Standard Packaging	23 kg (50.7 lb) multi-wall paper bags
Other	2.5%	Maximum Shelf Life	24 months

### Vibration Cast Data

Temperature		Density		PLC*	CMOR		CCS		HMOR		K-factor**		Abrasion Resistance
(°C)	(°F)	g/cm <sup>3</sup>	lb/ft <sup>3</sup>	%	MPa	psi	MPa	psi	MPa	psi	W·m <sup>-1</sup> ·K <sup>-1</sup>	BTU in ft <sup>2</sup> ·hr <sup>-1</sup> ·F	cm <sup>3</sup>
110	230	2.80	175	-	9.7	1410	37.9	5500	-	-	4.5	31.1	-
816	1500	2.77	173	-0.1	8.1	1180	26.2	3800	15.7	2270	2.9	20.4	8-9
1090	2000	2.76	172	-0.3	14.5	2100	40.8	5920	-	-	3.0	20.6	-
1370	2500	2.85	178	-1.4	24.0	3480	75.8	11000	-	-	3.4	23.3	-

\*Permanent linear change after firing

\*\*ASTM C-1113

### QUICK-BOND Liquid Ratios

QUICK-BOND Required	1 bottle to 1 bag
QUICK-BOND Bottle *	2.63 kg (5.8 lb)
Optional QUICK-BOND Drum	215 kg (475 lb)
Unit Weight *	25.6 kg (56.5 lb)
Yield per Unit	0.009 m <sup>3</sup> (0.30 ft <sup>3</sup> )

\* Revised bottle & bag weights

### Casting Details

QUICK-BOND Liquid Required, by weight	11.3%
Working Time ^	20-40 min
Initial Set ^	25-45 min
Final Set ^	1-4 hours

^ Typical under ambient conditions

Casting and additional installation guidelines may be found within the QUICK-FIRE® and QF-1 casting procedure bulletin.

Allied Mineral Products, Inc. supplies a complete line of monolithic refractories for the metals industry and other industrial applications. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.

**Warning:** QUICK-BOND is corrosive. 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. Wear chemical safety glasses and acid-resistant gloves during installation. 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.

(MXQF90)

Revised 2/23/17

© 2017 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.

Temperature		Density		PLC <sup>†</sup>	MOR		CCS	
°C	°F	g/cm <sup>3</sup>	lb/ft <sup>3</sup>	%	MPa	psi	MPa	psi
110	230	2.84	177	-	15.5	2250	96.5	14000
820	1500	2.82	176	-0.1	14.0	2030	73.8	10700
1090	2000	2.77	173	0.0	11.8	1710	84.1	12200
1370	2500	2.87	179	-1.4	18.8	2720	80.7	11700

<sup>†</sup> Permanent Linear Expansion, from the dried state

Porosity	Abrasion Loss
%	cm <sup>3</sup>
10.3	3-5
18.1	4-6
20.3	-
16.9	-

# PRODUCT BULLETIN

---

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

[www.alliedmineral.com](http://www.alliedmineral.com)

# **PRODUCT BULLETIN**

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

[www.alliedmineral.com](http://www.alliedmineral.com)