



METAL-ROK[®] 70M

Precast Shape

General Information

METAL-ROK[®] 70M is a fine, mullite-based metallic fiber reinforced precast refractory shape. METAL-ROK[®] 70M's unique design allows addition of metallic reinforcing fibers at levels significantly above those used in traditionally designed refractory castables. The finished shapes have excellent mechanical toughness and superior surface finish. METAL-ROK[®] 70M shapes have excellent hot strength, thermal shock resistance and abrasion resistance.

Typical applications include:

- Furnace doors, jambs and sills
- Incinerators
- Furnace hearths and hearth blocks
- Pouring spouts for metallurgical ladles
- Hot metal skimming tools
- Troughs and veneering

Steel applications include:

- Ladle retainer rings
- Reheat furnace piers
- Car deck perimeters
- Flue duct dampers
- Induction furnace covers

Benefits:

- High flexural toughness
- Outstanding volume stability
- Outstanding abrasion resistance
- Excellent thermal shock properties

Chemical Analysis*

Al ₂ O ₃	70.2%
SiO ₂	25.4%
CaO	2.2%
TiO ₂	1.1%
Fe ₂ O ₃	0.7%
Alkalies	0.3%
MgO	0.1%

Maximum Use Temperature	1350°C (2400°F)
Material Density with Fibers (as cast)	3.06 g/cm ³ (191 lb/ft ³)
Material Density prior to Fiber Addition	2.56 g/cm ³ (160 lb/ft ³)
Grain Size	1.0 mm (16 mesh) and finer

*Analysis is of refractory only, not including steel fibers

Vibration Cast Data

Temperature		Density		MOR		CCS		HMOR		Porosity	K-factor		Abrasion
°C	°F	g/cm ³	lb/ft ³	MPa	psi	MPa	psi	MPa	psi	%	W·m ⁻¹ ·K ⁻¹	BTU.in ft ² .hr.°F	cm ³
110	230	2.91	182	41.7	6050	95.0	13785	-	-	11.2	3.72	25.77	4.9
815	1500	2.89	180	36.0	5225	117.7	17085	28.4	4125	12.3	3.50	24.26	3.9
1100	2000	2.91	182	45.1	6550	116.7	16935	-	-	12.1	4.96	34.35	-
1400	2550	2.84	178	27.4	3971	70.4	10215	7.1	1035	11.3	7.56	52.36	-



Allied Mineral Products, Inc. supplies a complete line of monolithic refractories for industrial applications. 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. 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.

(MR70M)
Revised 7/11/13
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