



90-RAM® HS PLASTIC
TS LES10133 MX1N MOLD

**Monolithic
 Refractory
 Product Information**

Revision: D.00

Date: 08 Feb 2010

90-RAM® HS is a phosphate bonded extra high alumina refractory plastic that exhibits high strength at all temperature ranges . It also has excellent erosion, impact and abrasion resistance. This high green strength version eliminates the need for forming where anchors are present except for roof and arch construction .

Service Temperature:	3200 °F	Material Required:	192 lb/ft ³
Typical Water Required:	-	Maximum Grain Size:	6 Mesh US Sieve

Chemical Analysis

SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	Na ₂ O + K ₂ O	P ₂ O ₅	Other
2.6	93.3	0.2	0.3	3.4	0.2

Typical Physical Properties

Tested in accordance with International and ASTM Standards

Prefired to (°F)	Bulk Density (lb/ft ³)	Cold Crushing Strength (psi)	Cold Modulus of Rupture (psi)	Permanent Linear Change (%)
230	180	-	1080	-
1000	-	-	-	-0.6
1500	176	9250	2550	-0.3
2500	-	-	2675	-0.6
3000	-	-	2730	-

Other Physical Properties

Tested in accordance with International and ASTM Standards

Prefired to (°F)	Apparent Porosity (%)	Thermal Conductivity (Btu.in/h.ft ² .F)	Hot Modulus of Rupture (psi)	Permanent Volume Change (%)
230	-	19.8	-	-
1000	-	15.6	-	-
1500	-	14.9	-	-

Formerly: 90-RAM® HS 90-RAM® HS UK 90-RAM® HS EXPORT

Drying & Firing:	LES.1801	Installation Method:	N/A	Mixing / Installation:	LES.1301
Shotcreting:	N/A	Pumping:	N/A	MSDS Reference:	LES10133

The physical and/or chemical properties and specifications of the product set forth above represent typical average results obtained in accordance with generally accepted standard test methods conducted under controlled conditions, and are subject to normal manufacturing variations. Vesuvius reserves the right to modify the properties and specifications at any time without prior notice.

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