

HIPOR Moler insulating bricks

for back-up insulation - up to 900°C (1652°F)



Maximum service temperature	°C	900
	°F	1652
Bulk density, dry	kg/m ³	550
	lbs/cu.ft.	34
Cold crushing strength (EN 1094-5: 1995) @ room temperature	MPa	1.4
	lbs/sq.in.	203
Modulus of rupture (EN 993-6: 1995)	MPa	0.5
	lbs/sq.in.	73
Total porosity (EN 1094-4: 1995)	%	77
Permeability to air (BS EN 993-4: 1995)	nPm	18.5
Creep in compression (EN 993-9: 1997) after fluoride gas exposure, 50h at 800°C (1472°F), load 0.1 MPa (14.5 lbs/sq.in.)	%	1.3
Specific heat	kJ/(kg×K)	0.8
	BTU/(lb×°F)	0.19
Coefficient of reversible thermal expansion (BS 1902: section 5.3: 1990) @ 20°C-750°C (68°F-1382°F)	K ⁻¹	2×10 ⁻⁶
	°F ⁻¹	1.1×10 ⁻⁶
Resistance to thermal shock (EN 993-11: 1998)	cycles	>30
Linear reheat shrinkage (EN 1094-6: 1999)	%	1
Pyrometric cone equivalent (ASTM C24-89 ORTON cones)	°C	1350
	°F	2462
Thermal conductivity (ASTM C-182 supplemented by ASTM C-201)		
mean temp. @ 200°C	W/(m×K)	0.091
mean temp. @ 400°C	W/(m×K)	0.101
mean temp. @ 600°C	W/(m×K)	0.113
mean temp. @ 392°F	BTU/(sq.ft.×h×°F/in.)	0.631
mean temp. @ 752°F	BTU/(sq.ft.×h×°F/in.)	0.7
mean temp. @ 1112°F	BTU/(sq.ft.×h×°F/in.)	0.784
Chemical analysis, typical	%	
Silica	SiO ₂	77
Titanium oxide	TiO ₂	0.7
Ferric oxide	Fe ₂ O ₃	7
Alumina	Al ₂ O ₃	9
Magnesium oxide	MgO	1.3
Calcium oxide	CaO	0.8
Sodium oxide	Na ₂ O	0.55
Potassium oxide	K ₂ O	1.46
Sulphur trioxide	SO ₃	1.18
Loss on ignition 1025°C (1877°F)	LOI	1.5
Colour		Red

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Data are average results of tests conducted under standard procedures and are subject to variation. Data contained in this data sheet are supplied in good faith as a technical service and are subject to change without notice. Misprint and errors excepted.

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