SKAMOL SUPER-1100 E calcium silicate insulating slabs

for back-up insulation up to 1100°C (2012°F)

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Grade			SUPER-1100 E
Maximum service temperature			
		°C	1100
		°F	2012
Bulk density, dry			
		kg/m^3	245
		lbs/cu.ft.	15.3
Compressive strength (EN 1094-5: 1995)			
@ room temperature		MPa	2.7
		lbs/sq.in.	392
Modulus of rupture (EN 993-6: 1995)			
		MPa	1.8
		lbs/sq.in.	261
Total porosity			
		%	90
Permeability to air (BS EN 993-4: 1995)			
		nPm	0.5
Creep in compression (EN 993-9: 1997)			
50 h at 900°C (1652°F), load 0.1 MPa (14.5 lbs/sq.in.)		%	0.4
Specific heat			
		kJ/(kg×K)	0.84
		BTU/(lb×°F)	0.20
Coefficient of reversible thermal expansion (BS 1902: section 5.3: 1990)			
@ 20°C-750°C (68°F-1382°F)		K^{-1}	5.5x10^{-6}
		°F^{-1}	3.1x10^{-6}
Linear reheat shrinkage (EN 1094-6: 1999)			
12 h at 50°C (90°F) below max. service temp.		%	1.5
Pyrometric cone equivalent (ASTM C24-89 ORTON cones)			
		°C	1345
		°F	2453
Thermal conductivity (ASTM C-182)			
mean temp.	@ 200°C	W/(m×K)	0.09
	@ 400°C		0.11
	@ 600°C		0.14
	@ 392°F	BTU/(sq.ft×h×°F/in)	0.62
	@ 752°F		0.76
	@ 1112°F		0.97
Chemical analysis, typical		%	
Silica		SiO_2	47
Alumina		Al_2O_3	0.3
Ferric oxide		Fe_2O_3	0.3
Magnesium oxide		MgO	0.6
Calcium oxide		CaO	45
Sodium oxide		Na_2O	0.1
Potassium oxide		K_2O	0.1
Loss on ignition 1025°C (1877°F)		LOI	6
Colour			Grey

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