Data sheet

Densit® Super Insol Insulation slab

For DENSULATE installations - up to 1100°C (2012°F)

The Densit® Super - Isol / 1100 slabs cover a range of extremely lightweight insulation with excellent insulating value, high mechanical strength and good heat resistance. The slab is designed for maximum service temperature of 1000°C (1832°F) or 1100°C (2012°F), are light gray and have a smooth, rigid and non-dusting surface. Two grades are available:

- **Densit® Super – Isol**
- **Densit® Super 1100**

Due to exceptional heat resistance both grades of Densit® Super-Isol slabs will withstand continuous heat up to their full temperature use limits. The low thermal conductivity provides top insulation throughout the temperature range.

Standard sizes	
Metric	
Length x width:	Thickness
1000 x 100	25 mm*
US/British	
Length x width:	Thickness
39,4“ x 4“	1“*
Dimensional tolerances	
Length and width ± 2,5 mm (0,10“)	
Thickness .....± 1,5 mm (0,06“)	

***Other sizes and thickness**
25 through 100 mm are available on request.

APPLICATION

Densit® Super - Isol / 1100 is designed for the application as back-up of all refractory construction, especially for the Densit® DENSULATE Concept.

The combination of high performance features make the range of Densit® Super - Isol / 1100 slabs in combination with Densit® Wear/heat Protection lining the ideal choice for efficient insulation of kilns, furnaces, ovens, stoves, power plants, cement plants, steel plants, soaking pits, mains and other combustion or high-temperature process equipment. Due to their high resistance to carbon monoxide and hydrocarbons Densit® Super - Isol / 1100 slabs can be used in furnaces with reducing atmospheres. No disintegration of carbon deposition is found after 200 hours of exposure to CO at 450°C (842°F).

Technical Data

GRADE		Densit® Super - Isol	Densit® Super - 1100
Maximum service Temperature	°C °F	1000 1832	1100 2012
Bulk density, dry	Kg/m³ Lbs/cu.ft	225 14,0	245 15,3
Compressive strength (EN 1094-5:1995)	MPa Lbs/cu.ft	2,6 337	2,7 391,5
Total Porosity	%	91	90
Creep in compression *50h at 9000C (1652°F) Load 0,1 MPa (14,5 lbs /sq.ft.)*	%	0,5	0,4
Specific Heat	KJ/(KgxK) BTU(lbx°F)	0,84 0,20	0,84 0,20
Coefficient of reversible thermal expansion *(BS 1902:section 5,3:1990) @200C-750°C (68°F-1382°F)*	K^{-1} $0F^{-1}$	$5,5x\ 10^{-6}$ $3,1x\ 10^{-6}$	$5,5x\ 10^{-6}$ $3,1x\ 10^{-6}$
Linear reheat shrinkage *(EN 1094-6:1999) 12h at 50°C (122°F) below max. Service temperature*	%	1	1
Pyrometric cone equivalent *(ASTM C24-89 ORTON cones)*	°C °F	1345 2453	1345 2453
Thermal Conductivity *(ASTM C-182)*			
Mean temp. @ 200°C	W/(mxk)	0,06	0,07
@ 400°C		0,08	0,09
@ 600°C		0,10	0,10
@ 392°F	BTU/	0,42	0,49
@ 752°F	(sq.ftxhx°F/in)	0,55	0,62
@ 1112°F		0,69	0,69
Chemical analysis, typical (%)			
Silica	Si_O2	45	47
Alumina	AL_2O_3	0,2	0,3
Ferric oxide	Fe_2O_3	02,	0,3
Magnesium oxide	MgO	0,7	0,6
Calcium oxide	CaO	45	45
Sodium oxide	Na_2O	0,1	0,1
Potassium oxide	K_2O	0,2	0,1
Loss on ignition 1025°C (1877°F)	LOI	8	6
Colour		Grey	Grey

Please contact Wear-Concepts for further information.