Skamol A/S
Østergade 58-60
DK-7900 Nykøbing Mors
Denmark
Tel: +45 9772 1533
Fax: +45 9772 4975

www.skamol.com

SKAMOL VIP-12 HT

Structural Insulation - specially developed for the Iron and Steel Industry

Description

The VIP-12 HT is a vermiculite-based insulating board for tough environments. The board has a maximum service temperature of 1250°C (2282°F) and excellent thermal conductivity characteristics. This, combined with the thermal shock and wear resistance, makes the boards highly applicable in steel ladles, both as back-up insulation and as a hot-face application in mild condition furnaces. The extremely high physical strength of VIP-12 HT, combined with good thermal resistance, also makes the board ideal as back-up insulation in continuous caster tundishes.

Standard sizes

Skamol VIP12 HT boards are available in the following standard sizes:

Metric:	
Length x width	Thickness
300 x 115 mm	12.7 – 15 mm
Max. 480 x 300 mm Max. 610 x 305 mm	10 mm 12.7 – 15 – 20 – 25 mm
US/British:	
11.8" x 4.5"	0.5" – 0.6"
Max. 18.9" x 11.8" Max. 24" x 12"	0.4" 0.5" – 0.6" – 0.8" – 1.0"

Customer specific sizes are available on request.

Dimensional tolerances

Length and width ..... ± 2.5 mm (0.10")
Thickness ..... ± 1.0 mm (0.04")

Applications

- Ladles
- Tundishes
- Torpedo cars

Key Advantages

- High energy savings due to exceptional insulating properties
- Provides improved health & safety profile through lower shell temperatures
- Reduced CO_2 emission due to low heat flow & energy savings
- Improved economy of refractories due to effective insulation = longer refractory lifetime
- Fewer relinings as lifetime of ladles is increased
- High compressive strength ensures high safety profile

High maximum service temperature

High service temperature level enables the molten steel to wear 40-100 mm more from the refractory lining than conventional insulating boards, while still keeping within the specified safety margin. This results in less overall consumption of refractories and insulating material. The result is cost savings through improved production economy per ton of produced steel.

This sheet is provisional.

SKAMOL VIP-12 HT

Skamol A/S
Østergade 58-60
DK-7900 Nykøbing Mors
Denmark
Tel: +45 9772 1533
Fax: +45 9772 4975
insulation@skamol.dk

www.skamol.com

Maximum service temperature		
	°C	1250
	°F	2282
Bulk density, dry		
	kg/m^3	1400
	lbs/cu.ft.	87
Compressive strength (EN 1094-5: 1995)		
@ room temperature	MPa	14
	lbs/sq.in.	2030
Modulus of rupture (EN 993-6:1995)		
	MPa	2.5
	lbs/sq.in.	363
Total porosity (EN 1094-4: 1995)		
	%	50
Coefficient of reversible thermal expansion (BS 1902: section 5.3: 1990)		
@ 20°C-750°C (68°F-1382°F)	K^{-1}	$8.9x10^{-4}$
	$°F^{-1}$	$4.9x10^{-6}$
Linear reheat shrinkage (EN 1094-6: 1999)		
12 h at 1150°C (2102°F)	%	1.0
Thermal conductivity (ASTM C-182)		
mean temp. @ 200°C	W/(m×K)	0.32
@ 400°C		0.31
@ 600°C		0.31
@ 800°C		0.34
@ 392°F	BTU/(sq.ft.×h×°F/in)	2.22
@ 752°F		2.15
@ 1112°F		2.15
@ 1472°F		2.36
Chemical analysis, typical	%	
Silica	SiO_2	44
Magnesium oxide	MgO	32.6
Titanium dioxide	TiO_2	0.4
Ferric oxide	Fe_2O_3	6.9
Alumina	Al_2O_3	4.3
Calcium oxide	CaO	1.4
Sodium oxide	Na_2O	0.1
Potassium oxide	K_2O	6.1
Loss on ignition at 1025°C (1877°F)	LOI	2.8
Health & safety		
Material contains no crystalline silica (quartz and/or cristoballite)		
HS Tariff number		
(Harmonized Commodity Description and Coding System)		6806.90.00
Colour		SAND

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.

December 5, 2014