VULCOR INSULATION

SOLIBOARD™
HIGH TEMPERATURE BOARD

Datasheet English–Metric

Introduction
For the most demanding applications, operating in high temperatures or extreme conditions, we are offering 3 high temperature board solutions which are based on either a unique PCW-RCF hybrid composition or Pure PCW fiber technology. This productrange is targeted to operate in temperatures over 1300°C and up to 1650°C.

Poly Crystalline Wool (PCW), unlike amorphous RCF and LBP fibers, are produced in a micro-crystalline structure. For this reason, PCW fibers can be used up to close from the classification temperature with minimum shrinkage and have low susceptibility against chemical attack.

Taken the benefits from the PCW fiber structure we are offering you 3 products in our SoliBoard High Temperature range:

SoliBoard™ PCW35 HT

SoliBoard PCW35 HT combines the high-temperature stability of Polycrystalline Wool (PCW) fibers with the enhanced performance of SoliWool HA technology. This unique blend offers excellent strength, minimal shrinkage under heat, and reliable performance in continuous applications up to 1350°C.boards at a cost-effective price.

SoliBoard™ PCW100 HT

SoliBoard PCW100 HT is our 'standard' PCW board produced from PCW-mullite fibers with ≥ 72% Al_2O_3.and a classification temperature of 1600°C. Designed to operate in the most challenging atmospheres in (special) steel forging, laboratory kilns and the (technical) ceramic industry.

SoliBoard™ PCW100HT INO

At the very top of the SoliBoard™ product range, SoliBoard PCW100 HT INO represents our most advanced board solution. INO stands for "inorganic" reflecting the use of high-purity, inorganic binders and high-end fillers that contribute to its elevated density and exceptional performance. With a classification temperature of 1650°C, SoliBoard PCW100 HT INO ensures your furnace or kiln performs consistently and effectively.

Type

Boards from high temperature Poly Crystalline Wool (PCW) or PCW-RCF hybrid compositions and selected fillers.

Temperature range

SoliBoard™ PCW35 HT has a classification temperature of 1500°C.
SoliBoard™ PCW100 HT has a classification temperature of 1600°C.
SoliBoard™ PCW100 HT INO has a classification temperature of 1650°C.

The maximum continuous use temperature provided on the datasheet is guideline and only applicable in a clean oxidizing atmosphere.

Typical applications

- Thermal insulation for high temperature furnaces
- Hot face lining in furnaces with low concentrations of polutions*
- Laboratory-, vacuum- and dental kilns requiring stability and low off-gassing (**PCW100 HT-grade INO**)
- General technical insulation of furnaces and technical installations

* ask Vulcor for advise on your specific application.

Benefits

- Excellent insulation performance
- Excellent thermal stability and minimal shrinkage
- Resistance to most common polutions
- Low organic binder contents and off-gassing (**PCW100 HT-grade INO**)
- Cost effective solution versus pure PCW boards (**PCW35 HT-grade**)
- Capability to operate in reducing atmospheres (**PCW100 HT-grade**)

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Properties measured	Standard	Unit	SoliBoard™ PCW35 HT	SoliBoard™ PCW100 HT	SoliBoard™ PCW100 HT INO
Grade			PCW/RCF	PCW	PCW
Colour			white/tan	white/tan	white/tan
Surface			smooth	smooth	smooth
Classification temperature		°C	1500	1600	1650
Continuous use temperature		°C	1350	1500	1500
Density		kg/m3	320	280	420
Modules of Rupture (unfired)	EN 993-6	kPa	≥ 550	≥ 550	≥ 550
Compressive Strength (unfired)	EN ISO-8895				
@ 10% deformation		kPa	≥ 200	≥ 180	≥ 250
Loss on ignition		wgt%	< 8	< 8	< 2
Permanent linear shrinkage	EN 1094-7	%			
@1500°C			≤ 3		
@1600°C				≤ 2	≤ 1
Thermal conductivity	ASTM C201	W/mK			
@ 200°C			0,06	0,06	0,06
@ 400°C			0,08	0,08	0,08
@ 600°C			0,12	0,12	0,12
@ 800°C			0,15	0,15	0,15
@ 1000°C			0,20	0,19	0,19
@ 1100°C			0,22	0,21	0,21
@ 1200°C			0,25	0,24	0,24

Availability

SoliBoard is available in two standard formats; 1000×600 mm and 1200×1000 mm with thicknesses ranging from 6 mm all the way up to 100 mm. We offer two packaging options: durable carton boxes for manual on-site installation, and industrial packaging for automated, high-volume CNC based processing. Please find the quantities per pallet for either option:

	Standard Packaging Boards per Pallet			
	Standard Carton Box Packed			Industrial Packed
Thickness	per box	1000x600 mm	1200x1000 mm	1200x1000 mm
6 mm	20 pcs	560	280	300
10 mm	12 pcs	336	168	204
13 mm	10 pcs	280	140	156
15 mm	8 pcs	224	112	136
20 mm	6 pcs	168	90	102
25 mm	5 pcs	140	70	81
40 mm	3 pcs	90	45	51
50 mm	2 pcs	72	36	40
60 mm	1 pcs	48	24	34
75 mm	1 pcs	44	22	27
100 mm	1 pcs	36	18	20

Product range

SoliBoard is part of an extensive product range supplied by Vulcor Insulation. Vulcor Insulation is supplying insulation solutions from ambient to high temperature applications. All products offered by Vulcor are manufactured in house or sourced from exclusive trusted 3rd party partners.

First firing

SoliBoard formulations contain a small amount of organic binder to improve cold handling strength. During the initial firing, this binder burns off, which may produce temporary fumes and odor that dissipate shortly after.

Technical support

Vulcor Insulation provides specifiers and customers with guidance on all aspects of the materials selection for their application, the installation and compliance with relevant regulations and performance standards.

For additional information about product performance or to identify the recommended product for your application, please contact the team at Vulcor Insulation.

Contact

Headoffice

Vulcor Insulation BV
Wanraaij 4
6673 DN Andelst
The Netherlands
T: +31 (0)488 700 202
E: sales.support@vulcor.com
www.vulcor.com