



Material Type: High-density blanket slabs.

Classification Temperature

Pyro-Log™ Standart (R Grade): 1260°C
Pyro-Log™ Zirconia (H Grade): 1425°C

Description

Pyro-Log™ is the only 152 mm thick, high purity, needled blanket available in standard uncompressed densities up to 240 kg/m³.

Vertically-fiberized Pyro-Log fibre is of exceptional uniformity of dimensions and of naturally low shot content.

Pyro-Log offers a unique solution to the problems encountered in designing linings for use in the toughest of furnace environments.

Maximum Continuous Use Temperature

The maximum continuous use temperature depends on the application. Refer to our company for advice.

Features

- Resistant to devitrification at high temperature.
- Pyro-Log is available in standard uncompressed densities up to 240 kg/m³. Lubricant in the Log allows for extra compression during installation, ensuring good, tight joints.
- Combination of high density and opacity of its fibres to infrared radiation maintains the low thermal conductivity of Pyro-Log to high temperature.
- Pyro-Log has the unique characteristic that on firing it converts from a relatively soft, easily compressible slab to a tough, near monolithic structure with a board-like texture.
- The hard surface obtained after firing gives exceptionally high resistance to abrasion by flowing gases. This resistance can be enhanced by spraying the hot-face surface with Cerapreg or Kaowool Hardener (up to 40-45m/s) or by coating with Kaowool White Cement (up to 50-55m/s).
- The almost monolithic structure obtained after firing confers on Pyro-Log some load-bearing capacity which can be utilised in lightly loaded hearths.
- Pyro-Log is easily cut and shaped on site, or pre-shaped in the factory, to accommodate irregular sections or changes of profile, such as from oblong to round cross-section in ducts.
- The unique log structure allows us to produce L-shaped corner modules which ensures join-free linings around corners, both inside and outside.
- Thermal shock resistance.
- Good acoustic insulation.

Applications

Pyro-Log has a multitude of uses in heat containment applications in all industry groups, a selection of which are as follows:

- Ceramic Industry (kiln car insulation-furnace floors).
- Iron and Steel (walking beam furnace skid rail insulation).
- General (engineered shapes).
- Pyro-Log is the precursor material for the Pyro-Bloc range of mechanically fixed modules.

Main Properties		Pyro-Log™ Standard (R Grade)			Pyro-Log™ Zirconia (H Grade)		
		160	192	240	160	192	240
Maximum Continuous Use Temperature	°C	1260			1425		
Properties Measured at Ambient Conditions (23°C/50% RH)							
• Colour		white			white		
• Density un-compressed	kg/m ³	160	192	240	160	192	240
High Temperature Performance							
* Loss on ignition after 2 hours at 800 °C	%	<0.25			<0.25		
* Specific heat capacity at 1080 °C	kJ/kg.K	1.13			1.1.3		
* Permanent linear shrinkage after 24 hours isothermal heating at:							
1000°C	%	1.6			0.6		
1100°C	%	2.3			1.0		
1200°C	%	3.0			1.6		
1300°C	%	-			2.2		
1400°C	%	-			3.0		
* Thermal conductivity (ASTM) at a mean temperature of:		Blanket-Laid			Edge-Grain		
		160	192	240	160	192	240
400°C	W/m.K	0.081	0.077	0.071	0.107	0.100	0.093
600°C	W/m.K	0.121	0.112	0.097	1.172	0.159	0.138
800°C	W/m.K	0.168	0.151	0.132	0.254	0.233	0.201
1000°C	W/m.K	0.216	0.193	0.172	0.344	0.315	0.277
Chemical Composition							
SiO ₂	%	55			47		
Al ₂ O ₃	%	45			37		
ZrO ₂	%	-			15		

Availability and Packaging

Normally available in slabs 152 mm thick.
 Standard log size 1000 x 610 x 152 mm.
 Special sizes (subject to quantity) cut to order from the overall log size of 152 x 1220 x 11940 mm.
 Also subject to quantity, Pyro-Log can be made available in 100 mm and 125 mm thicknesses.
 Packed into cartons.

The values given herein are typical average values obtained in accordance with standard test methods and subject to normal manufacturing variations. They are supplied as technical data and may change without notice. Contact our company to obtain detailed information.

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