

Pyro-Log

DESCRIPTION

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

TYPE

High density blanket slabs.

MAXIMUM CONTINUOUS USE TEMPERATURE

Pyro-Log Standard (R Grade) : 1260°C

Pyro-Log Zirconia (H Grade) : 1425°C

The maximum continuous use temperature depends on the application. In case of doubt, refer to your local Morgan Thermal Ceramics distributor for advice.

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

FEATURES

- Resistant to devitrification at high temperature
- Pyro-Log is available in standard uncompressed densities up to 240kg/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

Pyro-Log

Main properties		Standard (R Grade)	Zirconia Fibre (H Grade)
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
Permanent linear shrinkage after 24 hours isothermal heating at:			
1000°C	%	1.6	0.6
1100°C	%	2.3	1.0
1200°C	%	3	1.6
1300°C	%	-	3.2
1400°C	%	-	3
Specific heat capacity at 1080°C	kJ/kg.K	1.13	1.13

Thermal conductivity (ASTM) at mean temperature of:

		Blanket – Laid			Edge - Grain		
		160	192	240	160	192	240
400°C	W/m.K	0.08	0.08	0.07	0.10	0.10	0.09
600°C	W/m.K	0.12	0.11	0.10	0.17	0.16	0.14
800°C	W/m.K	0.17	0.15	0.13	0.25	0.23	0.20
1000°C	W/m.K	0.22	0.19	0.17	0.34	0.32	0.28

Availability and Packaging

Normally available in slabs 152mm thick.

Standard log size 1000 x 610 x 152mm.

Special sizes (subject to quantity) cut to order from the overall log size of 152 x 1220 x 11940mm.

Also subject to quantity, log can be made available in 100mm and 125mm thicknesses.

Packed into cartons.

The values given herein are typical values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.

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