

Superwool[®] Pyro-Log[™]

Product Data Sheet



Product Description

Superwool Plus and Superwool HT Pyro-Log is the base to our Superwool Pyro-Bloc Modules. Monolithic slabs with classification temperatures of 1200°C (2190°F) and 1300°C (2370°F), Superwool Pyro-Logs feature excellent performance in high erosion applications. Manufactured using patented low biopersistent fibre manufacturing technology that produces a low shot fibre product that features improved handleability.

Superwool Plus and Superwool HT Pyro-Log exhibit outstanding insulating properties at elevated temperatures and have excellent thermal stability and retain their original soft fibrous structure up to its maximum continuous use temperature.

Features

- Excellent thermal stability results in reliable and consistent thermal insulating performances
- Immune to thermal shock
- Binder or lubricant free
- Thermal stability
- Low heat storage
- High erosion resistance no damage up to 50 m/sec :
 - Superwool Plus Pyro-Bloc tested at 1200°C (2190°F)
 - Superwool HT Pyro-Bloc tested at 1300°C (2370°F)
- Excellent resistance to chemicals and pollutants, especially alkali metals
- Excellent tensile strength
- Good sound absorption

Applications

- Floors in Power Generation, Petrochemical and other Industrial furnaces and kilns
- Kiln cars for Ceramic industry
- Skid rail insulation in Iron and Steel walking beam furnaces
- Back up insulation for IFB or Castable linings

Environmental & Health Safety

Superwool low biopersistent fibres manufactured by Morgan Advanced Materials are not classified as carcinogenic by IARC or under any national regulations on a global basis. They have no requirements for warning labels under GHS (Globally Harmonised System for the classification and labelling of chemicals).

In Europe, Superwool fibres meet the requirements specified under Note Q of European Regulation EC/1272/2008 (on Classification, Labelling and Packaging of substances and mixtures). All Morgan Advanced Materials Superwool low biopersistent fibre products are therefore exonerated from classification and labelling as hazardous in Europe.

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Properties	Superwool Plus Pyro-Log	Superwool HT Pyro-Log
Colour	White	White
Classification Temperature, °C (°F), EN 1094-1 (2008)	1200 (2190)	1300 (2370)
Continuous Use Temperature, °C (°F)	1100 (2010)	1200 (2190)
Density, kg/m ³ (pcf), EN 1094-1 (2008)	160, 192 (10, 12)	160, 192, 240 (10, 12, 15)
Specific heat capacity, kJ/kg•K, 1000°C (1832°F)	1.05	1.22
Loss of Ignition, %, EN 1094-1 (2008)		
2 hrs @ 800°C (1472°F)	<1	<1
Linear Shrinkage, %, after 24 hours, EN 1094-1 (2008)		
1000°C (1832°F)	<1.5	0.2
1100°C (2010°F)	-	0.5
1200°C (2190°F)	-	0.8
Chemical Analysis, %		
Silica, SiO ₂	62-68	70-80
Calcium Oxide, CaO	26-32	18-26
Magnesium Oxide, MgO	3-7	<5
Others	<1	<3

Thermal Conductivity, W/m•K, ASTM C201	Superwool Plus Pyro-Log		Superwool HT Pyro-Log		
	Density, kg/m ³	160 (10)	192 (12)	160 (10)	192 (12)
200°C	0.06	0.05	0.07	0.08	0.06
400°C	0.11	0.09	0.14	0.12	0.1
600°C	0.17	0.15	0.21	0.17	0.15
800°C	0.24	0.21	0.30	0.25	0.22
1000°C	0.32	0.28	0.40	0.33	0.29
1200°C	-	-	0.54	0.44	0.39
Thermal Conductivity, BTU•in/hr•ft ² •°F, ASTM C201					
500°F	0.51	0.42	0.63	0.63	0.51
1000°F	1.04	0.90	1.27	1.07	0.93
1500°F	1.71	1.49	2.14	1.74	1.54
1832°F	2.22	1.94	2.78	2.29	2.01
2000°F	2.50	2.20	3.23	2.64	2.34
2500°F	-	-	3.73	3.06	2.71

Product Availability

Superwool Pyro-Log are manufactured and available globally, but packaging, density and thickness availability will vary by region.

Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support providing specific packaging availability for your local business needs.

Whilst the values and application information in this datasheet are typical, they are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials - Thermal Ceramics.