Pyro-Log™ Cerafiber® and Cerachem®

Product Data Sheet

Product Description

RCF Pyro-Log is the base to our RCF Pyro-Bloc Modules. Monolithic Cera® fibre slabs with classification temperatures of 1260°C (2300°F) and 1430°C (2600°F), RCF Pyro-Logs feature excellent performance in high erosion application atmospheres and are manufactured using our market leading Cera fibres that are a blend of high purity ceramic fibres and raw materials.

Cera fibre based Pyro-Logs 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 tested at 1260°C (2300°F) and 1430°C (2600°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

www.morganthermalceramics.com
Email: marketing.tc@morganplc.com
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Properties	Pyro-Log - Cerafiber/R Grade	Pyro-Log - Cerachem/ZR Grade
Colour	white	white
Classification Temperature, °C, EN 1094-1 (2008)	1260 (2300)	1430 (2600)
Continuous Use Temperature, °C (°F)	1205 (2200)	1345 (2450)
Density, kg/m³, EN 1094-1 (2008)	128, 160, 192, 240 (8, 10, 12, 15)	160, 192, 240 (10, 12, 15)
Specific heat capacity, kJ/kg•K, 1000°C (1832°F)	1.28	1.13
Loss on Ignition, %, EN 1094-1 (2008)		
2 hours @ 800°C (1472°F)	<1	<1
Linear Shrinkage, %, EN 1094-1 (2008)		
1000°C (1832°F)	1.6	0.6
1100°C (2012°F)	2.3	1
1200°C (2200°F)	3	1.6
1300°C (2372°F)	-	3.2
1400°C (2552°F)	-	3
Chemical Analysis, %		
Alumina, Al_2O_3	42-48	33-37
Silica, SiO_2	52-58	48-52
Zirconia, ZrO_2	-	13-17
Other	trace	trace

	Pyro-Log - Cerafiber/R Grade				Pyro-Log - Cerachem/ZR Grade		
Thermal Conductivity, W/m•K, ASTM C201							
Density, kg/m³	128 (8)	160 (10)	192 (12)	240 (15)	160 (10)	192 (12)	240 (15)
200°C	0.07	0.06	0.06	0.06	0.07	0.07	0.06
400°C	0.12	0.11	0.1	0.1	0.11	0.1	0.1
600°C	0.18	0.17	0.15	0.15	0.17	0.15	0.13
800°C	0.27	0.26	0.22	0.19	0.24	0.22	0.18
1000°C	0.37	0.36	0.31	0.25	0.33	0.3	0.23
1200°C	0.50	0.49	0.41	0.34	0.44	0.41	0.3
Thermal Conductivity, BTU•in/hr•ft²•°F, ASTM C201							
500°F	0.58	0.51	0.49	0.51	0.56	0.54	0.50
1000°F	1.11	1.04	0.92	0.88	1.03	0.92	0.83
1500°F	1.91	1.84	1.58	1.38	1.72	1.55	1.27
1832°F	2.57	2.50	2.15	1.73	2.29	2.08	1.60
2000°F	2.98	2.91	2.45	2.03	2.63	2.43	1.82
2500°F	3.48	3.41	2.87	2.33	3.06	2.85	2.07

Product Availability

R and ZR Grade 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.

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