

FibreX HCA is a special stainless alloy with excellent corrosion resistance to high temperatures. Based on Iron-Chrome-Aluminium alloys, the corrosion resistance of FibreX HCA is further enhanced by the use of aluminium and chromium in the steel chemistry to produce a fibre with a tenacious and durable protective alumina oxide layer to extend the temperature capability and lifetime of the fibres in extreme conditions.

They are used in areas where refractory strength is less important, whilst still maintaining toughness in the refractory.

The fibres can be supplied in various lengths and diameters in plain or crimped forms. FibreX HCA can be used in refractories operating the following conditions:

- Thermal cycling to 1700°C*
- Continuous soaking to 1350°C
- Moderate mechanical shock
- All furnace atmospheric conditions except chlorine/fluorine

* Dependent on refractory permeability, porosity and corrosion atmosphere

Chemical Composition (maximum unless stated):

C	Si	Mn	P	S	Cr	Al	Others
0.10	1.0	1.0	0.040	0.010	23.0- 26.0	4.5- 6.5	0.5

Melting Temperature: 1465°C - 1530°C

Critical Oxidation Temperature:

Cyclic Heating: 1300°C

Continuous Service: 1350°C

Minimum Tensile Strength (20°C):

Annealed Condition: 700 MPa

Cold Worked Condition: 1200 MPa

Modulus of Elasticity: 350 GPa

Coefficient of Thermal Expansion (870°C): 13.5 x 10⁻⁶/°C

Thermal Conductivity (540°C): 13.0 W/mK

Typical Dimensions and Aspect Ratios:

Fibre ^{*1} Length	Typical Equivalent Dia ^{*2}	Typical Aspect ^{*3} Ratio	Typical No/kg
20mm	0.50 mm	40	34,000
25mm	0.50 mm	50	27,500
25mm	0.70 mm	36	14,000
35mm	0.70 mm	50	10,000

^{*3} Aspect ratio is calculated as fibre length ÷ diameter

^{*1} Other fibre lengths can be manufactured on request

^{*2} Other fibre diameters can be manufactured on request

HOW TO USE FIBREX HCA

TEL: +44 (0) 1773 863100

sales@fibrectech.com

www.fibrectech.com

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