



Data Sheet

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

The fibres can be supplied in various lengths and diameters in plain, top hat or crimped forms. FIBREX AL performs best in refractories operating in the following conditions:

- Thermal cycling to 1600°C*
- Continuous soaking to 1300°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	0.020	0.010	13.0-15.0	4.0-6.0	0.5

Melting Temperature: 1455°C- 1520°C

Critical Oxidation Temperature:

Cyclic Heating: 1250 °C

Continuous Service: 1300 °C

Minimum Tensile Strength (20°C):

Annealed Condition 700 MPa

Cold Worked Condition 1200 MPa

Modulus of Elasticity : 280 GPa

Coefficient of Thermal Expansion (870°C): 12.8 x 10⁻⁶ /°C

Thermal Conductivity (540°C): 14.6 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	32,000
25mm	0.50 mm	50	24,000
25mm	0.70 mm	36	14,000
35mm	0.70 mm	50	6,600

^{*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

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