

ME430 Stainless Steel Fibres reinforce monolithic refractories against thermal and mechanical shock by reducing cracking and spalling susceptibility. The fibres can be used in refractory operating conditions of:

- Moderate thermal cycling, or
- Continuous fibre soaking temperature up to 1000°C in refractory
- Moderate mechanical shock
- Reasonable high temperature oxidation resistance

Chemical Composition (maximum unless stated):

C	Si	Mn	P	S	Cr	Ni	others
0.40	3.5	2.0	0.050	0.030	14.0-18.0	0.5	-

Melting Temperature: 1480-1530°C

Critical Oxidation Temperature:

Cyclic Heating: 870 °C

Continuous Service: 1000 °C

Tensile Strength:

20 °C 850 MPa

870 °C 47 MPa

Modulus of Elasticity (870°C): 83 GPa

Coefficient of Thermal Expansion (870°C): 13.7 x 10⁻⁶ /°C

Thermal Conductivity (540°C): 26.5 W/mK

ME Fibre – Typical Dimensions and Aspect Ratios

Fibre ^{*1} Length	Typical Equivalent Dia ^{*2}	Typical Aspect ^{*3} Ratio	Typical No/kg
12mm	0.30mm	40	151,000
20mm	0.40mm	50	51,000
25mm	0.50mm	50	26,000
25mm	0.60mm	42	18,100
35mm	0.60mm	58	12,000
35mm	0.70mm	50	5,000

^{*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

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