

ME446 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:

- High thermal cycling, or
- Continuous fibre soaking temperature up to 1200°C in refractory
- Moderate mechanical shock
- 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	23.0-27.0	0.5	-

Melting Temperature: 1425-1510°C

Critical Oxidation Temperature:

Cyclic Heating: 1100 °C

Continuous Service: 1200 °C

Tensile Strength:

20 °C 900 MPa

870 °C 53 MPa

Modulus of Elasticity (870°C): 97 GPa

Coefficient of Thermal Expansion (870°C): 13.1 x 10⁻⁶ /°C

Thermal Conductivity (540°C): 24.8 W/m²K

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	13,000
35mm	0.70mm	50	9,500

^{*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

