

**ME446 Stainless Steel Fibres** reinforce monolithic refractory against thermal and mechanical shock by reducing cracking and spalling susceptibility. ME446 performs best in refractory operating in the following conditions:

- Thermal cycling to 1600 °C
- Continuous soaking to 1200 °C
- Moderate - High mechanical shock
- High hot-strength ductility
- Oxidizing, sulphur, reducing, hydrogen atmospheres

### Chemical Composition

C	Si	Mn	Ni	Cr
≤0.2	≤2.00	≤2.5	---	23~27

**Melting Temperature** 1425 - 1510 °C

### Critical Oxidation Temperature:

Cyclic Heating:	1100 °C
Cyclic Heating (in a refractory)	1600 °C
Continuous Service:	1200 °C

### Tensile Strength:

20	930 Mpa
870	63 Mpa

**Modulus Of Elasticity (870 °C):** 90~100 Gpa

**Thermal Expansion Coefficient (870 °C):** 13.14@10<sup>-6</sup>/°C

**Heat Conductance (540 °C):** 24.6 W/m<sup>2</sup>K

### Melt Extract Stainless Steel Fiber Dimensions and Aspect Ratios

Dimension	Length	Equivalent Dia	Cross section	Aspect Ratio
0.5 x 20 mm	20 mm	0.5 mm	0.2 x 1 mm	40
0.5 x25 mm	25 mm	0.5 mm	0.2 x 1mm	50
0.5 x 35 mm	35 mm	0.5mm	0.2 x 1 mm	70
0.6 x 35 mm	35 mm	0.6 mm	0.2 x 1.5mm	58
0.7 x 60 mm	60 mm	0.7 mm	0.2 x 2mm	86

1. Normal diameter & length 0.5 x 25mm
2. Other fiber lengths can be delivered on request.
3. Other fiber diameters can be manufactured on request.
4. Aspect ratio is calculated as fiber length / diameter.