

Fibrex HT Stainless Steel Fibres reinforce monolithic refractories against thermal and mechanical shock by reducing cracking and spalling susceptibility. Fibrex HT is a new proprietary product researched and developed as an alternative to ME446 and ME430 steel fibres and performs best in refractory operating conditions of:

- Thermal cycling up to 1600°C*
- Continuous fibre soaking temperature up to 1200°C
- Extreme mechanical shock
- Oxidising, sulphur, reducing atmospheres

*Dependent on the insulation and porosity of the refractory

Chemical Composition (maximum unless stated):

| C | Si | Mn | P | S | Cr | others |
|------|-----|-----|-------|-------|-----------|--------|
| 0.25 | 3.5 | 2.0 | 0.050 | 0.030 | 17.0-21.0 | - |

Melting Temperature: 1425-1510°C

Critical Oxidation Temperature:

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

Tensile Strength:

| | |
|--------|---------|
| 20 °C | 740 MPa |
| 870 °C | 63 MPa |

Modulus of Elasticity (870°C): 90-100 GPa

Coefficient of Thermal Expansion (870°C): 12.1 @10⁻⁶ /°C

Thermal Conductivity (540°C): 24.6 W/m²K

ME Fibre – Typical Dimensions and Aspect Ratios

| Fibre Length ^{*1} | Typical Equivalent Dia ^{*2} | Typical Aspect Ratio ^{*3} | 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

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