



Data Sheet

ME309 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 1150°C in refractory
- High mechanical shock
- High temperature corrosive atmospheres (sulphidation, chlorination etc)

Chemical Composition (maximum unless stated):

| C | Si | Mn | P | S | Cr | Ni | others |
|------|-----|-----|-------|-------|-----------|-----------|--------|
| 0.50 | 3.5 | 2.0 | 0.050 | 0.030 | 22.0-24.0 | 12.0-15.0 | - |

Melting Temperature: 1400-1455°C

Critical Oxidation Temperature:

Cyclic Heating: 1000 °C

Continuous Service: 1150 °C

Tensile Strength:

20 °C 515 MPa

870 °C 140 MPa

Modulus of Elasticity (870°C): 200 GPa

Coefficient of Thermal Expansion (870°C): 17.2 @10⁻⁶ /°C

Thermal Conductivity (540°C): 18.7 W/m²K

ME Fibre – Typical Dimensions and Aspect Ratios

| Fibre Length ^{*1} | Typical Equivalent Dia ^{*2} | Typical Aspect Ratio ^{*3} | Typical No/kg |
|----------------------------|--------------------------------------|------------------------------------|---------------|
| 12mm | 0.34mm | 40 | 151,000 |
| 20mm | 0.47mm | 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

