

Technical Data Sheet

ME 446

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 2200 °F in the 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 | 0.10 | 23.0-27.0 | 0.5 | - |

Melting Temperature: 2600-2750°F

Critical Oxidation Temperature:

Cyclic Heating: 1900 °F

Continuous Service: 2200 °F

Tensile Strength (typical values):

(1600°F): 7650 psi

Modulus of Elasticity (1600°F): 14,000 ksi

Coefficient of Thermal Expansion (1600°F): 7.3×10^{-6} /°F

Thermal Conductivity (1000°F): 14.3 BTU/hr/ft/°F

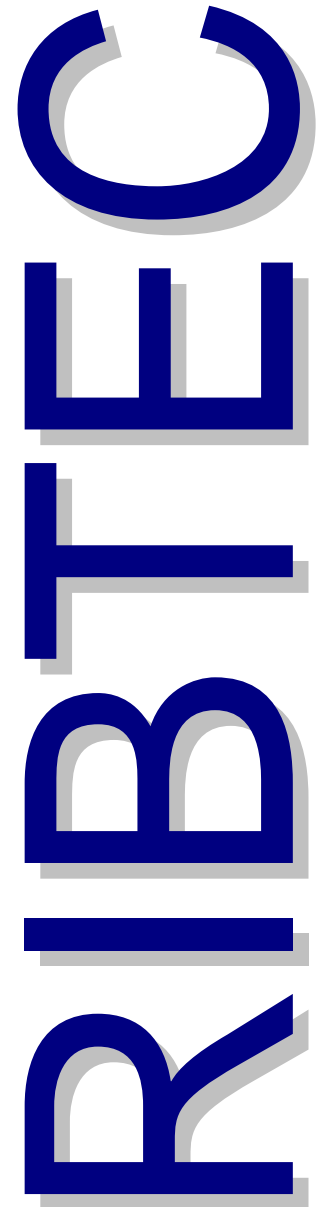
ME Fibre – Typical Dimensions and Aspect Ratios

| Fibre ^{*1} Length | Typical Equivalent Dia ^{*2} | Typical Aspect ^{*3} Ratio | Typical No/lb |
|-------------------------------|---|---------------------------------------|------------------|
| 0.25 in | 0.007 in | 36 | 381,000 |
| 0.50 in | 0.013 in | 38 | 54,000 |
| 0.75 in | 0.019 in | 40 | 17,000 |
| 1.00 in | 0.020 in | 50 | 12,000 |
| 1.38 in | 0.025 in | 55 | 5,500 |
| 2.00 in | 0.032 in | 63 | 2,300 |

*1 Other fibre lengths can be manufactured on request

*2 Other fibre diameters can be manufactured on request

*3 Aspect ratio is calculated as fibre length ÷ diameter



Tel: +1-614-864-5444

Fax: +1-614-864-5305

Email: info@ribtec.com R/US/10/10