

Technical Data Sheet

ME 304

ME304 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:

- Moderate thermal cycling
- Continuous fibre soaking temperature up to 2012°F in the refractory
- Moderate 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 | 0.10 | 18.0-20.0 | 8.0-10.5 | - |

Melting Temperature: 2552-2650°F

Critical Oxidation Temperature:

Cyclic Heating: 1598 °F

Continuous Service: 2012 °F

Tensile Strength (typical values):

68 °F 74,760 psi

1600 °F 18,000 psi

Modulus of Elasticity (1600°F): 18,000 ksi

Coefficient of Thermal Expansion (1600°F): 11.2×10^{-6} /°F

Thermal Conductivity (1000°F): 12.4 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

The data published in this datasheet is based on experimental test results and is presented in good faith but no guarantees are made implicitly or explicitly for the use of the above product in your specific application. We recommend you test the product to your satisfaction before committing to full-scale use.

Tel: +1-614-864-5444

Fax: +1-614-864-5305

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

