

ME430 Stainless Steel Fibers reinforce monolithic refractories against thermal and mechanical shock by reducing cracking and spalling susceptibility.

The fibers can be used in refractory operating conditions of:

- Moderate thermal cycling, or Continuous fiber soaking temperature up to 1832 °F in the refractory
- Moderate mechanical shock
- Reasonable 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	0.030	14.0-18.0	0.5	-

Melting Temperature: 2700-2790 °F

Critical Oxidation Temperature:

Cyclic Heating: 1598 °F

Continuous Service: 1832 °F

Tensile Strength (typical values):

68 °F 123,000 psi

1600 °F 68,000 psi

Modulus of Elasticity (1600°F): 12,000 ksi

Coefficient of Thermal Expansion (1600°F): $7.6 \times 10^{-6}/^{\circ}\text{F}$

Thermal Conductivity (1000°F): 15.3 BTU/hr/ft/oF

ME Fibre – Typical Dimensions and Aspect Ratios

Fiber Length* ¹	Typical Equivalent Dia* ²	Typical Aspect Ratio* ³	Typical No/lb
0.50 in	0.016 in	31	68,500
0.75 in	0.020 in	38	23,000
1.00 in	0.020 in	50	12,000
1.375 in	0.020 in	69	5,500



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*1 Other fiber lengths can be manufactured on request

*2 Other fiber 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. R/US/03/19