OWEN CORP (N.Z.) Limited

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Technical Data Sheet

ME446 Stainless Steel Fibres reinforce monolitich 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 1100°C in 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	-

Melting Temperature:	1425-1510°C
Critical Oxidation Temperature:	
Cyclic Heating:	1205 °C
Continuous Service:	1100 °C
Tensile Strength:	
870 °C	53 MPa
Modulus of Elasticity (870°C):	97 GPa
Coefficient of Thermal Expansion (870°C):	13.1 @10^{-6} /°C
Thermal Conductivity (540°C):	24.8 W/m^2K

ME Fibre – Typical Dimensions and Aspect Ratios

Fibre *1 Length	Typical Equivalent Dia *2	Typical Aspect *3 Ratio	Typical No/kg
6mm	0.18mm	33	839,000
12mm	0.34mm	35	118,000
20mm	0.47mm	43	37,000
25mm	0.50mm	50	26,000
35mm	0.64mm	56	12,000
50mm	0.83mm	60	5,000

*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