

# Technical Data Sheet

## INCONEL 601

INCONEL601 fibres increase the resistance of monolithic refractory to thermal and mechanical shock by reducing cracking and spalling susceptibility. INCONEL601 fibres possess excellent high temperature strength & ductility, combined with high temperature oxidation and carburization resistance. Use INCONEL601 fibres in the following refractory operating conditions:

- Severe cycling to 1600°C (+/-, dependant on refractory)
- Continuous service temperatures to 1250°C
- Extreme mechanical shock
- Extreme high temperature corrosive atmospheres

### Chemical Composition (maximum unless stated):

C	Si	Mn	P	S	Cr	Ni	Al	Fe
0.10	0.5	1.0	0.050	0.10	21.0-25.0	58.0-63.0	1.0-1.7	bal

**Melting Temperature:** 1320-1370°C

### Critical Oxidation Temperature:

Cyclic (in refractory, dependant on insulating properties):	1600 °C (+/-)
Cyclic (fibre only):	1250 °C
Continuous: (in refractory, and fibre only)	1250 °C

### Mechanical Properties (typical values):

Yield Strength (20 °C)	205 MPa
Tensile Strength (20 °C)	550 MPa
Ductility (Elongation) (20 °C)	>30 %
<b>Modulus of Elasticity (24°C):</b>	206 GPa
<b>Coefficient of Thermal Expansion (1000°C):</b>	17.8 @ 10 <sup>-6</sup> /°C
<b>Thermal Conductivity (1000°C):</b>	27.8 W/m <sup>2</sup> K

### ME Fibre – Typical Dimensions and Aspect Ratios

Fibre <sup>*1</sup> Length	Typical <sup>*2</sup> Equivalent Dia	Typical Aspect <sup>*3</sup> Ratio	Typical No/kg
25mm	0.30-0.40mm	62-80	53,000
35mm	0.40-0.50mm	70-87	23,000

\*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

