



# Data Sheet

METALX is a proprietary stainless steel fibre with excellent corrosion resistance to very high temperatures. Based on Iron-Chrome-Aluminium alloys, the remarkable corrosion resistance of METALX is developed by steel chemistry design using special additions to produce a fibre with a tenacious and durable protective oxide layer to extend the lifetime of the fibres in extreme conditions.

METALX fibres are often used in very onerous conditions where traditional fibres oxidise rapidly. METALX performs best in refractory operating in the following conditions:

- Thermal cycling to 1700°C\*
- Continuous soaking to 1300°C
- Moderate Mechanical shock
- All furnace atmospheric conditions

\* Dependent on refractory insulation and porosity properties

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## Chemical Composition (maximum unless stated):

C	Si	Mn	P	S	Cr	others
0.40	3.0	2.0	0.050	0.020	20.0-25.0	4.0-6.0

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**Melting Temperature:** 1480-1530°C

## Critical Oxidation Temperature:

Cyclic Heating: 1200 °C

Continuous Service: 1300 °C

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## Tensile Strength:

20 °C 750 MPa

870 °C 36 MPa

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**Modulus of Elasticity (870°C):** 200 GPa

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**Coefficient of Thermal Expansion (870°C):** 15.0 @10<sup>-6</sup> /°C

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**Thermal Conductivity (540°C):** 16.0 W/m<sup>2</sup>K

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## ME Fibre – Typical Dimensions and Aspect Ratios

Fibre <sup>*1</sup> Length	Typical Equivalent Dia <sup>*2</sup>	Typical Aspect <sup>*3</sup> Ratio	Typical No/kg
12mm	0.43mm	28	78,000
20mm	0.43mm	47	47,000
25mm	0.43mm	58	37,000
35mm	0.43mm	81	27,000

<sup>\*3</sup> Aspect ratio is calculated as fibre length ÷ diameter

<sup>\*1</sup> Other fibre lengths can be manufactured on request

<sup>\*2</sup> Other fibre diameters can be manufactured on request

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