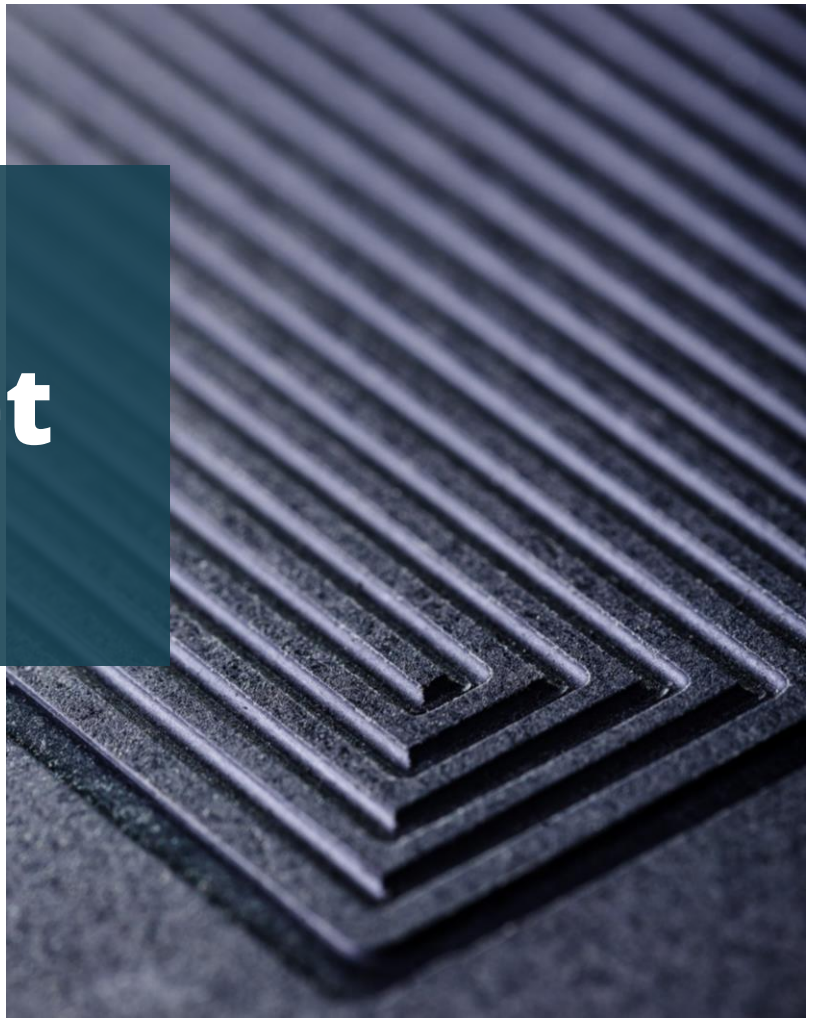


Material Data Sheet HT400



This HT400 material is suitable for low and high temperature PEM fuel cells. Thanks to the unique properties of carbon fiber, this material shows very high electrical conductivity, excellent mechanical properties, resistance to high temperature, and high chemical stability.

Physical data

	Units	Values
Nominal web thickness	mm	0,4
Density	g/cm ³	1.48 (HT-PEMFCs)
Plate density homogeneity	g/cm ³	STD < 0.04 g/cm ³
Hydrogen permeability	[mol/s/m ² /MPa]	4.55 x 10 ⁻⁰⁵ @ Std pressure and temperature
Thermal conductivity (through plane)	W·m ⁻¹ ·K ⁻¹	0.56 (+- 0.03)
Thermal conductivity (in plane)	W·m ⁻¹ ·K ⁻¹	5.75 (+- 0.19)
Areal Specific Resistance (400µm)	mΩ·cm ²	< 10
Max temperature use	°C	180

Mechanical properties

	Units	Values
Young modulus	GPa	20
Maximum force at break	N	1,550
Ultimate stress	MPa	72
% of elongation before break	%	3
Tensile strength	MPa	90
Poisson coefficient	-	0.304
Flexural strength	MPa	> 3,000
Thermal expansion @80°C	1/K	6.51 x 10 ⁻⁶
Thermal expansion @180°C	1/K	5.78 x 10 ⁻⁶

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