

# SMC 500-1

## Soft Magnetic Composite

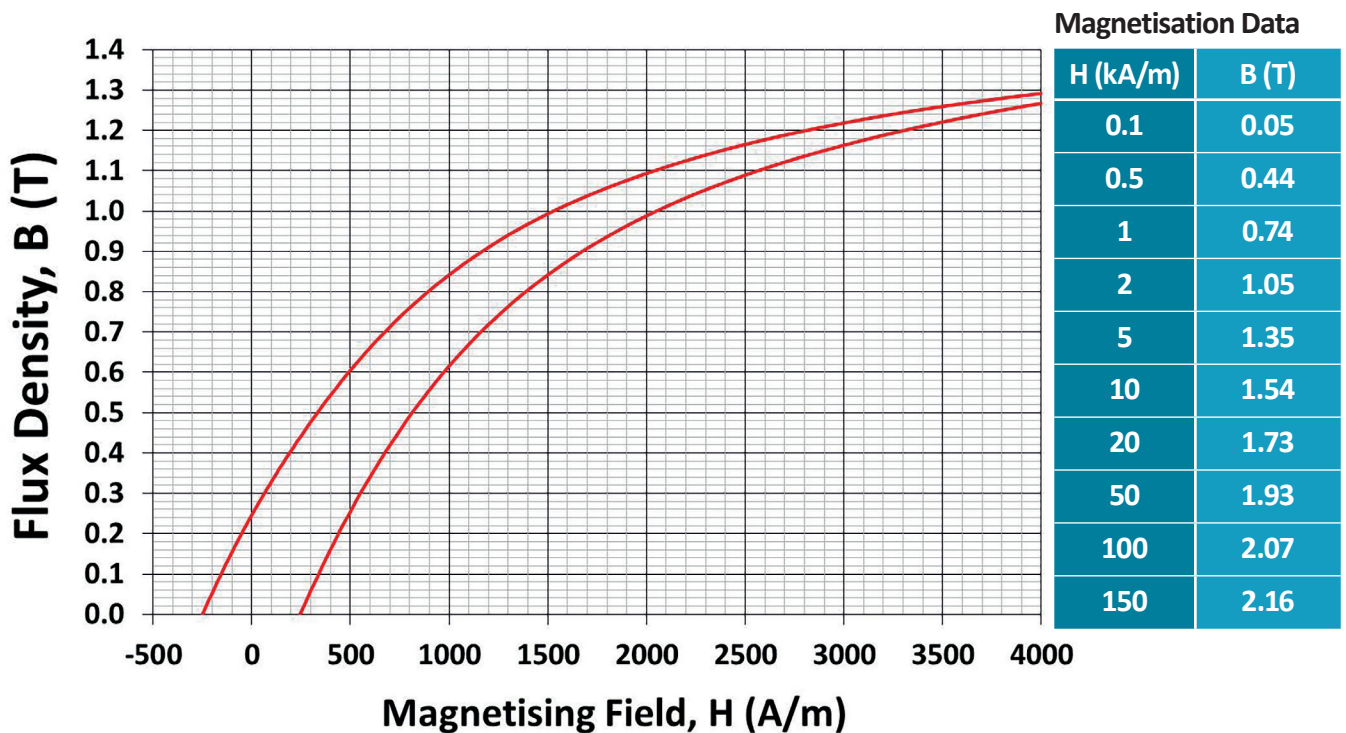
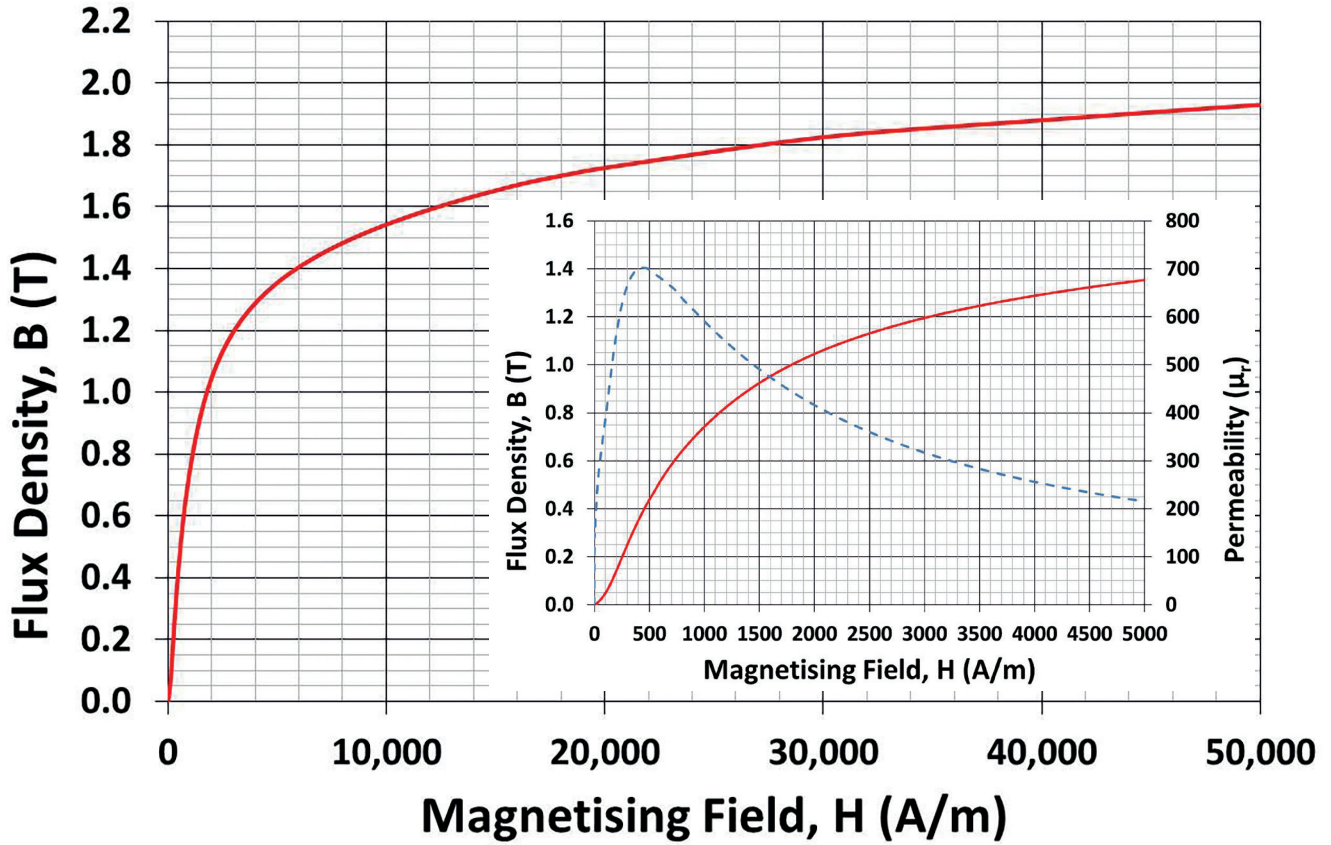
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Product data sheet



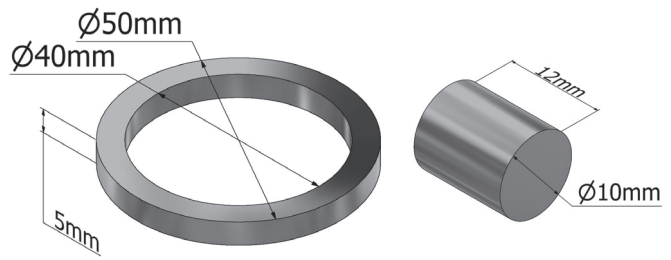
[sgtec.com](http://sgtec.com)

## ➤ Magnetic Properties



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Jsat	1.98 T
Max Permeability ( $\mu$ max)	700*
Remanence (Br)	0.24 T
Coercivity (Hc)	260 A/m
Resistivity	7,000 $\mu\Omega$ .cm

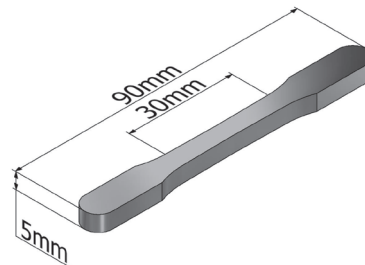


Ring used to obtain magnetic data and test bar used to obtain high field data

\*Anhyseretic BH measurements

## ➤ Mechanical Properties†

Flexural Strength	50 MPa
Yield Strength, Rp <sub>0.2</sub>	15 MPa
Tensile Strength, Rm	15 MPa
Modulus of Elasticity, E	110 GPa
Hardness	25 HRB



Dog Bone used for Tensile Testing

## ➤ General Properties

Density ( $\rho$ )	7.45 g/cm <sup>3</sup>
Thermal Expansion	11x10 <sup>-6</sup> /K
Thermal Conductivity	23 W/m.k

## ➤ Further Information

SMC 500-1 is suitable for applications requiring compromise between cost and performance. Applications include **Fuel Injection** solenoids.

SG Technologies produces SMC components using ultra dense powder compaction and proprietary heat treatment. Finishing operations can include grinding, edge conditioning and deburring.

**Individual components** can be tested using our magnetic component verification techniques. This assures quality control for transient electromagnetic performance.

\*Determined following IEC404-4.

†Determined following MPIF standard 10 tensile test bar

For all further information and data regarding the production of finished parts please contact us at SG Technologies:

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