

# SMC 130-5

## Soft Magnetic Composite

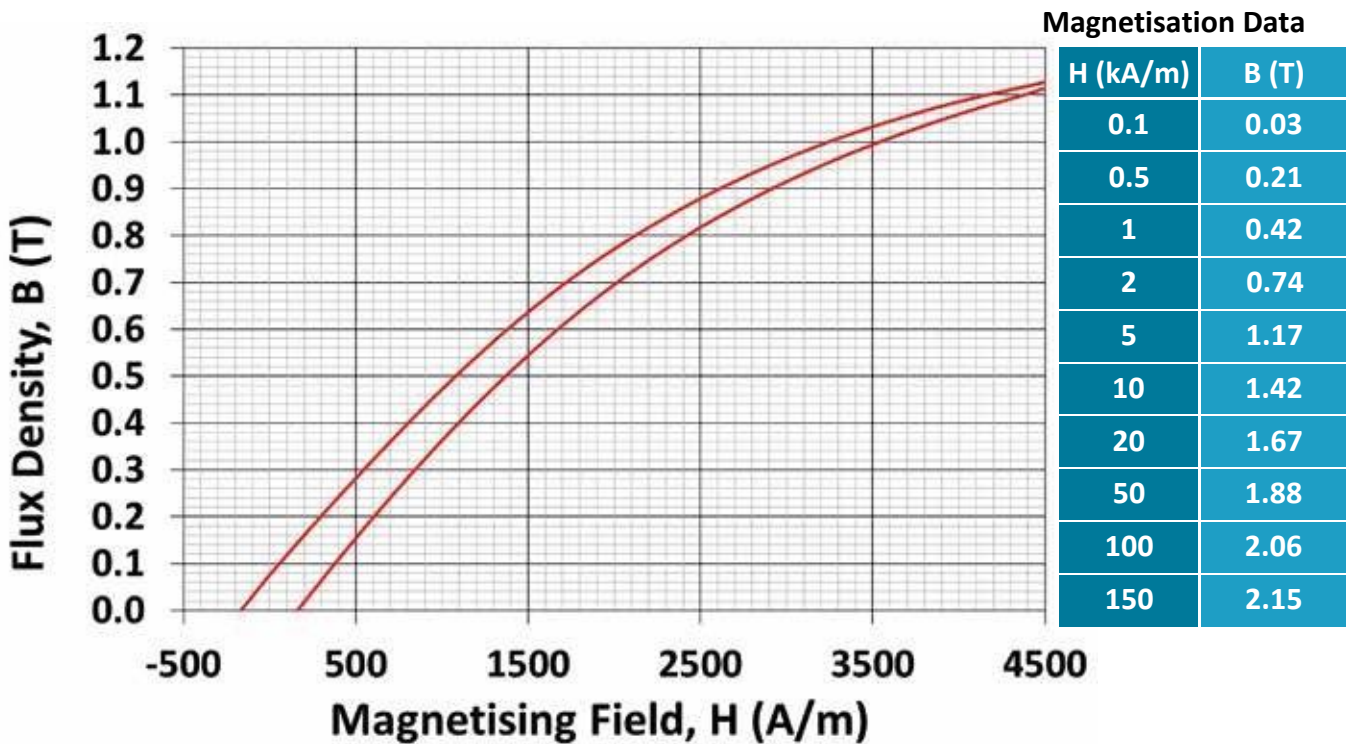
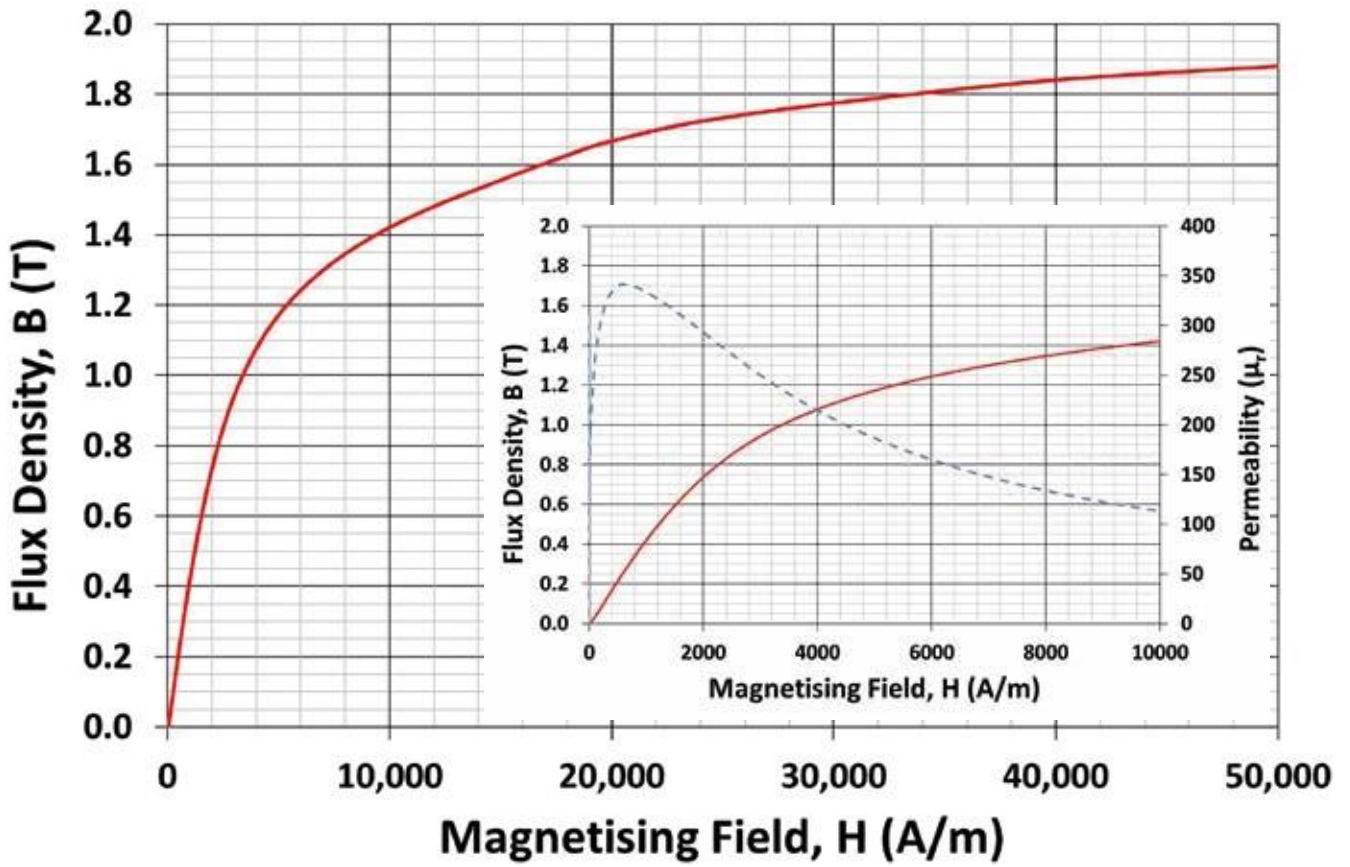
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Product data sheet



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## ► Magnetic Properties

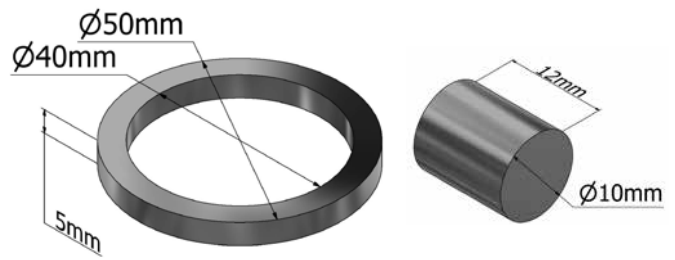


## ➤ Magnetic Properties\*

Jsat	1.97 T
Max Permeability ( $\mu$ max)	340*
Remanence (Br)	0.08 T
Coercivity (Hc)	170 A/m
Resistivity	>200,000 $\mu\Omega\cdot\text{cm}$ **

\*Anhysteretic BH measurements

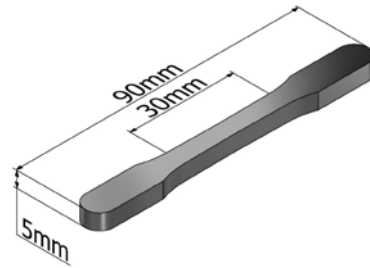
\*\* Resistivity can depend on part and process



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

## ➤ Mechanical Properties†

Flexural Strength	35 MPa
Yield Strength, $R_{p0.2}$	15 MPa
Tensile Strength, $R_m$	15 MPa
Modulus of Elasticity, E	100 GPa
Hardness	10 HRB



Dog Bone used for Tensile Testing

## ➤ General Properties

Density ( $\rho$ )	7.40 $\text{g}/\text{cm}^3$
Thermal Expansion	$11 \times 10^{-6}/\text{K}$
Thermal Conductivity	19 $\text{W}/\text{m}\cdot\text{K}$

## ➤ Further Information

SMC 130-5 is suitable for applications where minimal high frequency electromagnetic losses are important. Note the ultra-high electrical resistivity. Applications include **Inductors** and **high speed motors**.

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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