

# Ultra-Dense Compression Bonded NdFeB

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Product data sheet



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

## ➤ General Information

SG Technologies has developed reliable and robust production processes to greatly enhance the magnetic and mechanical properties of Compression Bonded NdFeB magnets. This works with any grade of NdFeB rapidly solidified powder.

Specifically, powders which may have been developed for:

- High Br
- High Temperature Operation
- Low Cost
- High Mechanical Strength

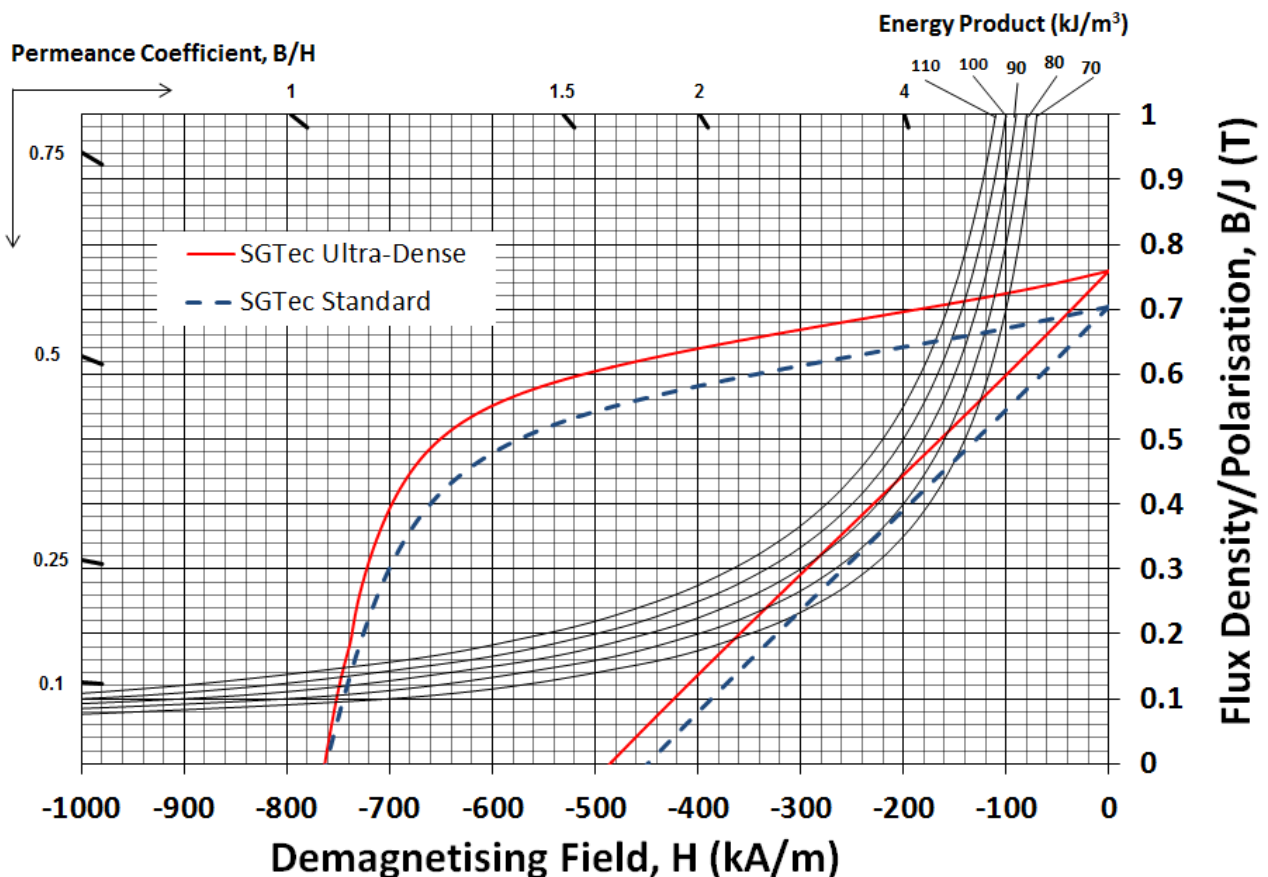
The typical increase in density over our industry standard grades is 5-7 %.

This means we are up to 7% higher on remanence (Br) and 15% on maximum energy product (BHmax).

By careful choice of binding agents, we have also increased the mechanical properties by up to 100% in mechanical tests; a feature of great interest in high speed electrical machines.

In the following graphs and data, we illustrate this improvement by showing our standard material and our new **Ultra-Dense** properties using MQP B+ grade of powder.

## ➤ Magnetic Properties



## ➤ Magnetic Properties\*

Magnetic Property	SGTec Ultra-Dense	cgs units	SGTec Standard	cgs units
Density	6300 kg/m <sup>3</sup>	6.3 g/cm <sup>3</sup>	6000 kg/m <sup>3</sup>	6.0 g/cm <sup>3</sup>
Br	0.76 T	7.6 kG	0.70 T	7.0 kG
HcB	485 kA/m	6.1 kOe	445 kA/m	5.6 kOe
HcJ	760 kA/m	9.6 kOe	760 kA/m	9.6 kOe
BHmax	92 kJ/m <sup>3</sup>	11.5 MGOe	79 kJ/m <sup>3</sup>	9.9 MGOe
μrec	-1.15	-1.15	-1.15	-1.15
B Temp α% (< 100°C)	-0.11 %K <sup>-1</sup>	-0.11 %K <sup>-1</sup>	-0.11 %K <sup>-1</sup>	-0.11 %K <sup>-1</sup>
HcJ Temp β% (< 100°C)	-0.35 %K <sup>-1</sup>	-0.35 %K <sup>-1</sup>	-0.35 %K <sup>-1</sup>	-0.35 %K <sup>-1</sup>

\*Determined following IEC404-5.

## ➤ Further Information

SG Technologies invites existing and prospective customers to contact our specialists to discuss their requirements.

The combinations of material choice, binding agents, ultimate magnetic and mechanical requirements could well be a unique solution to a customer challenge. We would be delighted to share our knowledge with you.

For situations which require corrosion protection a full range of coatings are available; please enquire.

SG Technologies has excellent relationships with suppliers of magnetisation equipment; please ask for recommendations.

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

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