



Magnequench

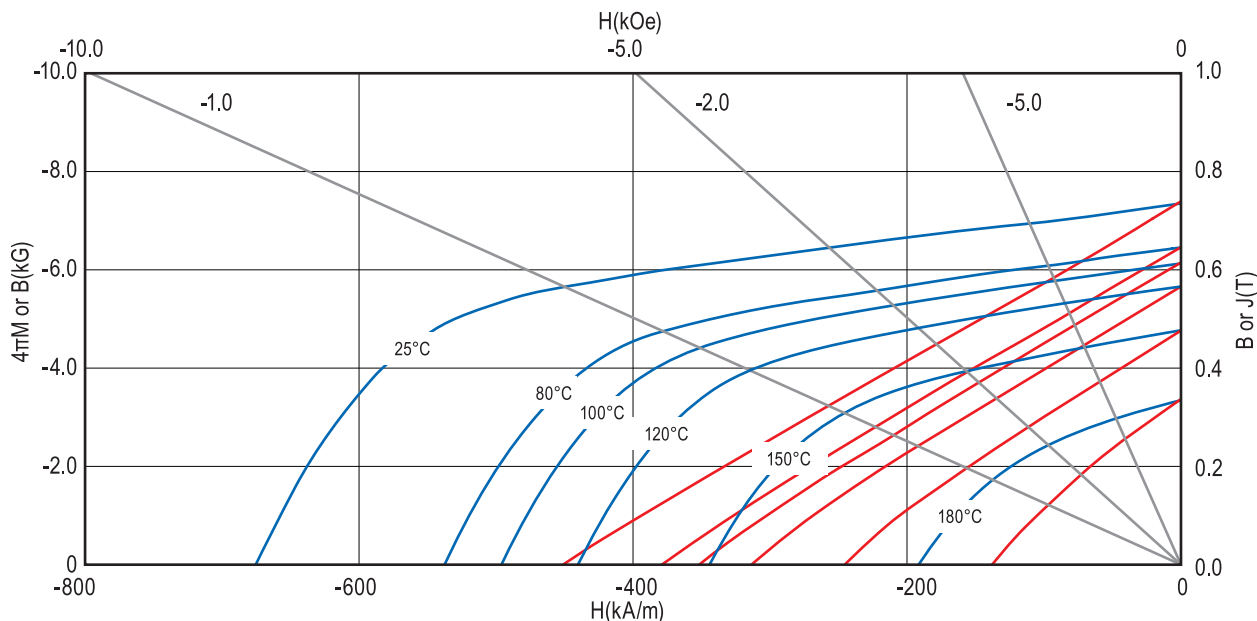
MQP™-10-8.5HD-20180-070 Isotropic Powder*

Material Description

MQP-10-8.5HD-20180 is an isotropic powder designed for the manufacture of bonded magnets. This powder grade offers unique compaction properties enabling higher density bonded magnets. This powder offers lower springback and require lower ejection forces both of which increase magnet making productivity. MQP-10-8.5HD-20180 is produced by employing a proprietary rapid solidification process followed by a milling process and heat treatment.

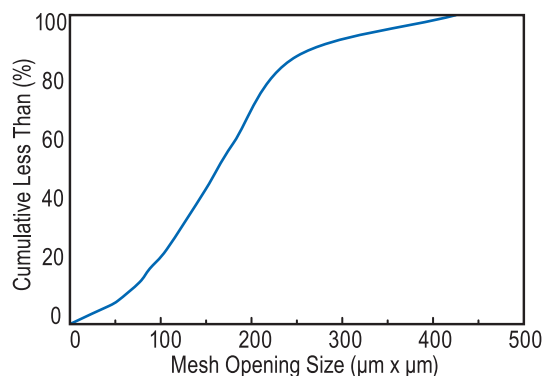
Powder Magnetic Characteristics¹

		SI	CGS
Specified	Residual Induction, B_r	710-730 mT	7.10-7.30 kG
	Energy Product, $(BH)_{max}$	76-86 kJ/m ³	9.5-10.8 MGOe
	Intrinsic Coercivity, H_{ci}	645-705 kA/m	8.1-8.9 kOe
Typical	Magnetizing Field to $\geq 95\%$ Saturation H_s	≥ 1275 kA/m	≥ 16.0 kOe
	Temperature coefficient of B_r , α , to 100° C	-0.20 %/°C	
	Temperature coefficient of H_{ci} , β , to 100° C	-0.36 %/°C	
	Coercive Force, H_c	440 kA/m	5.5 kOe
	Curie Temperature, T_c	219 °C	
	Maximum Operating Temperature ²	140-150 °C	
	Maximum Process Temperature ³	225-250 °C	



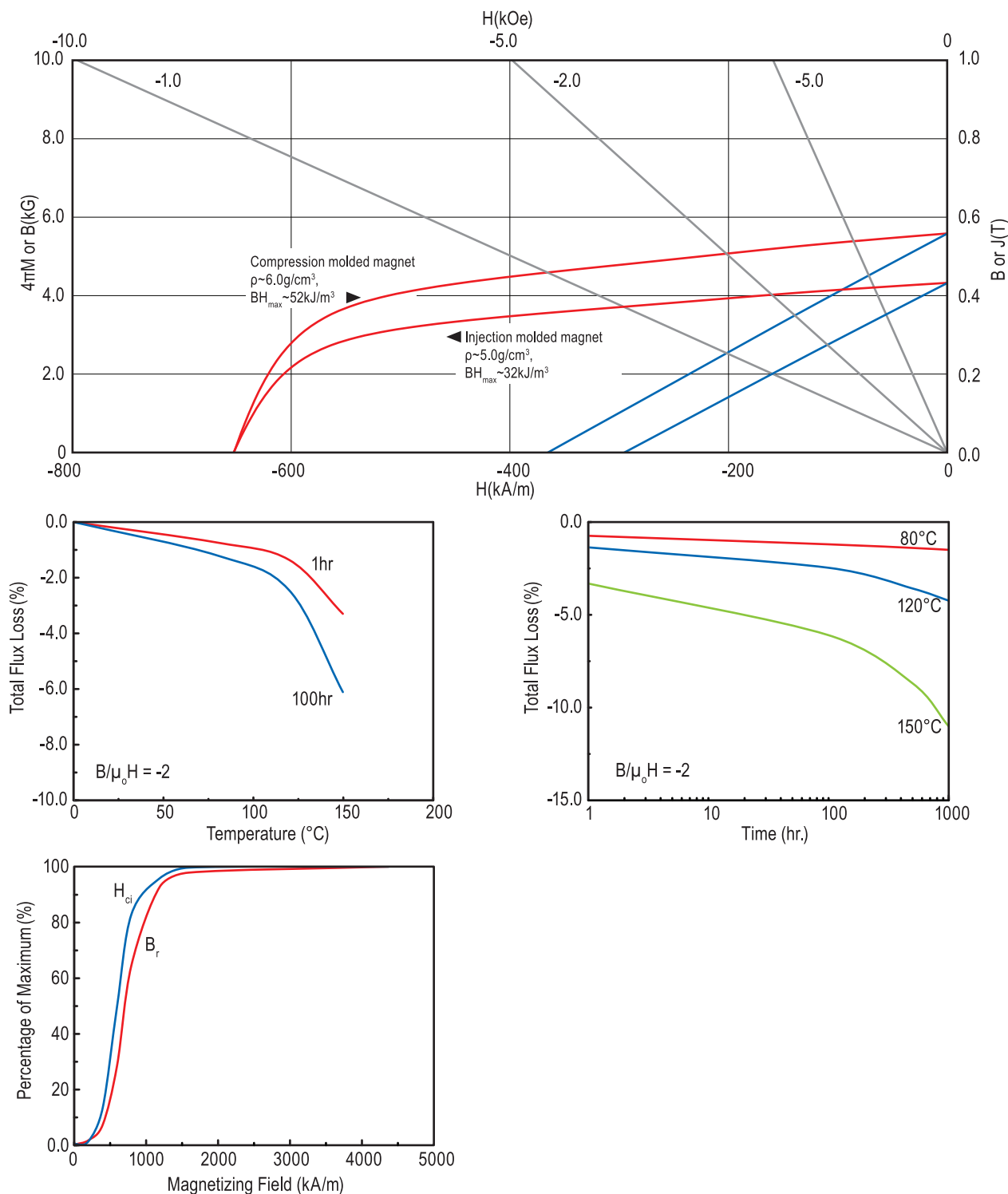
Physcial Characteristics

Specified	Sieve Screen Analysis:	
	Total > 40 Mesh (420x420μm opening)	< 0.1wt%
	Total > 60 Mesh (250μm x 250μm opening)	< 25wt%
	Total < 270 Mesh (53μm x 53μm opening)	< 12wt%
Typical	Density (theoretical)	7.60 g/cm ³
	Apparent Density	2.73 g/cm ³



*Contact Magnequench to obtain up-to-date product specifications.

Bonded Magnet Characteristics⁴



¹ Properties measured at 25 $^{\circ}\text{C}$, unless otherwise specified.

² The Maximum Operating Temperature for a magnet made from this powder is dependent upon the specific application, the type of magnet, and magnet geometry. Contact our Application Engineers for more information.

³ Maximum Process Temperature is defined here at $<2\%$ reduction in coercivity (i.e. structural loss) after heating powder 1 hour in air.

⁴ These properties are typical at 25 $^{\circ}\text{C}$ and are representative only. Magnet properties are dependent upon powder loading and magnet manufacturing conditions. Contact our Application Engineers for information about Magnequench magnet products.

* This powder, the products that are made there from, and its manufacturing processes are subject to one or more of the following United States Patents: 6,183,572; 6,478,890; 6,527,875; 6,855,265; 6,979,409; 7,087,185; 7,144,463.