



Magnequench

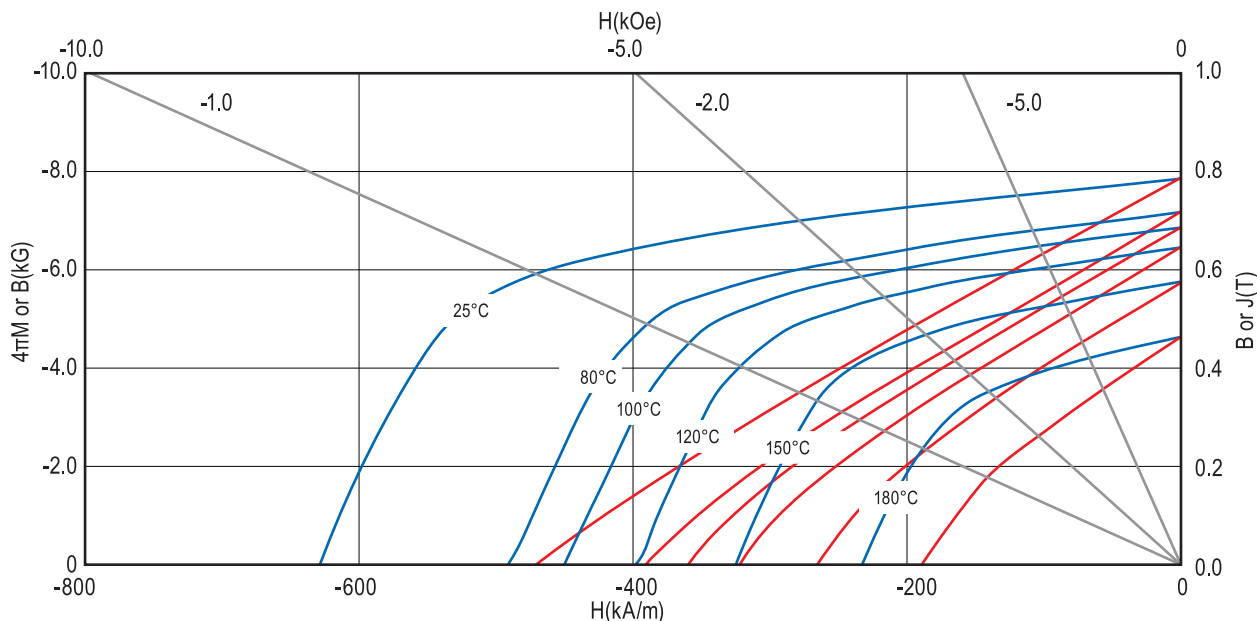
MQP™-12-8HD-20175-070 Isotropic Powder*

Material Description

MQP-12-8HD-20175 is an isotropic powder designed for the manufacture of bonded magnets. This powder grade compacts better, higher density magnets can be achieved without increasing the pressing force. In addition, it offers lower springback and requires lower ejection forces, both of which increase magnet making productivity. MQP-12-8HD-20175 is produced by employing a proprietary rapid solidification process followed by a milling process and heat treatment.

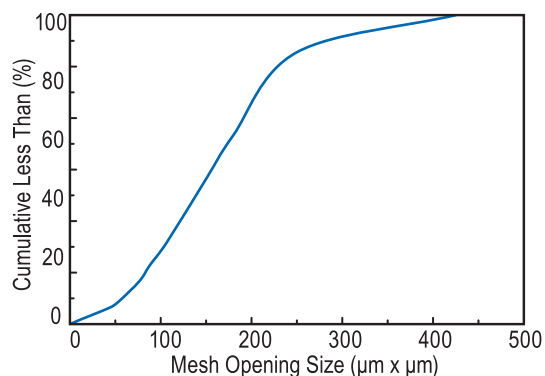
Powder Magnetic Characteristics¹

		SI	CGS
Specified	Residual Induction, B_r	770-790 mT	7.70-7.90 kG
	Energy Product, $(BH)_{max}$	90-100 kJ/m ³	11.3-12.6 MGOe
	Intrinsic Coercivity, H_{ci}	615-675 kA/m	7.7-8.5 kOe
Typical	Magnetizing Field to ≥ 95% Saturation H_s	≥ 1350 kA/m	≥ 17.0 kOe
	Temperature coefficient of B_r , α , to 100° C	-0.17 %/°C	
	Temperature coefficient of H_{ci} , β , to 100° C	-0.39 %/°C	
	Coercive Force, H_c	470 kA/m	5.9 kOe
	Curie Temperature, T_c	246 °C	
	Maximum Operating Temperature ²	130-140 °C	
	Maximum Process Temperature ³	225-250 °C	



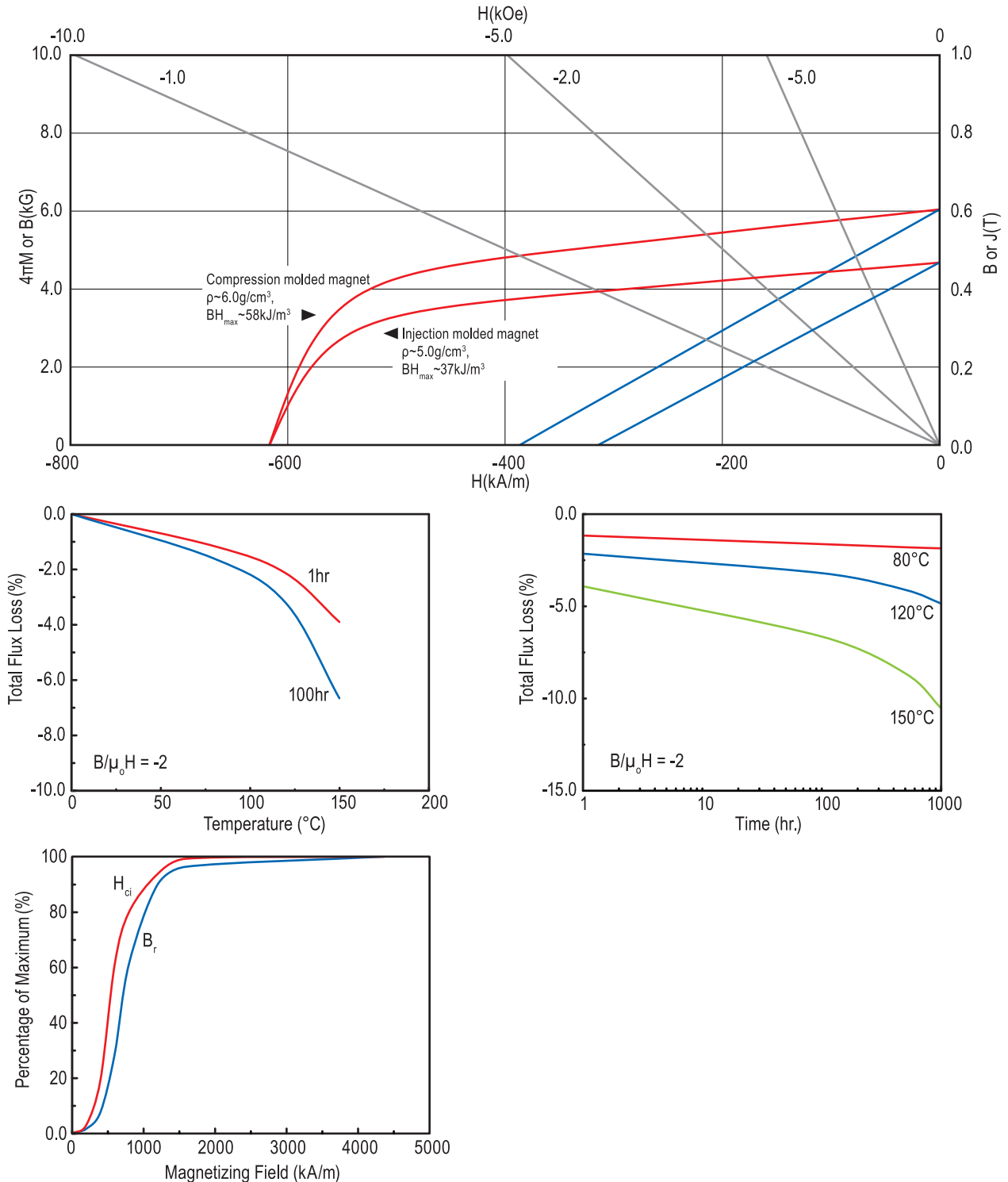
Physical Characteristics

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 23°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 23°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.