

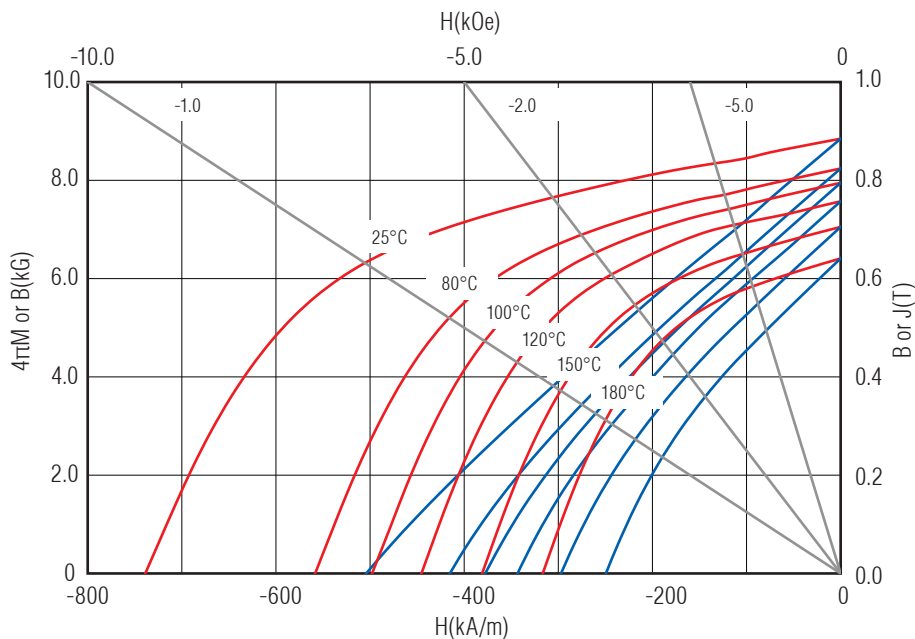
MQP™-B-20173-070 ISOTROPIC POWDER*

Material Description

MQP-B-20173-070 is an isotropic powder, designed to perform similarly to MQP-B-20076-070 while using a more cost optimized alloy system. This powder is based on a patented Nd-Pr-Fe-B alloy composition that maintains similar magnetic performance as its Nd based counterpart, MQP-B-20076-070. This material 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	883-903	mT	8.83-9.03 kG
	Energy Product, $(BH)_{max}$	116-124	kJ/m ³	14.6-15.6 MGOe
	Intrinsic Coercivity, H_{ci}	690-750	kA/m	8.7-9.4 kOe
Typical	Magnetizing Field to $\geq 95\%$ Saturation H_s	≥ 1600	kA/m	≥ 20.0 kOe
	Temperature coefficient of B_r , α , to 100° C	-0.14	%/°C	
	Temperature coefficient of H_{ci} , β , to 100° C	-0.44	%/°C	
	Intrinsic Coercivity, H_c	505	kA/m	6.3 kOe
	Curie Temperature, T_c	298	°C	
	Maximum Operating Temperature ²	120-150	°C	
	Maximum Process Temperature ³	225-250	°C	



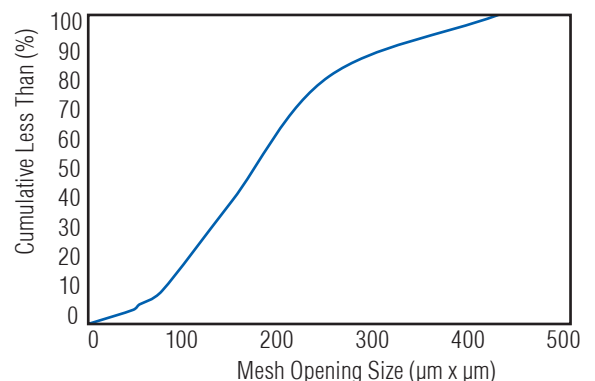
Physical Characteristics

Specified

Sieve Screen Analysis:
 Total > 80 Mesh (177x177 μ m opening) < 2wt%
 Total > 100 Mesh (149x149 μ m opening) < 20wt%
 Total < 270 Mesh (53x53 μ m opening) < 20wt%

Typical

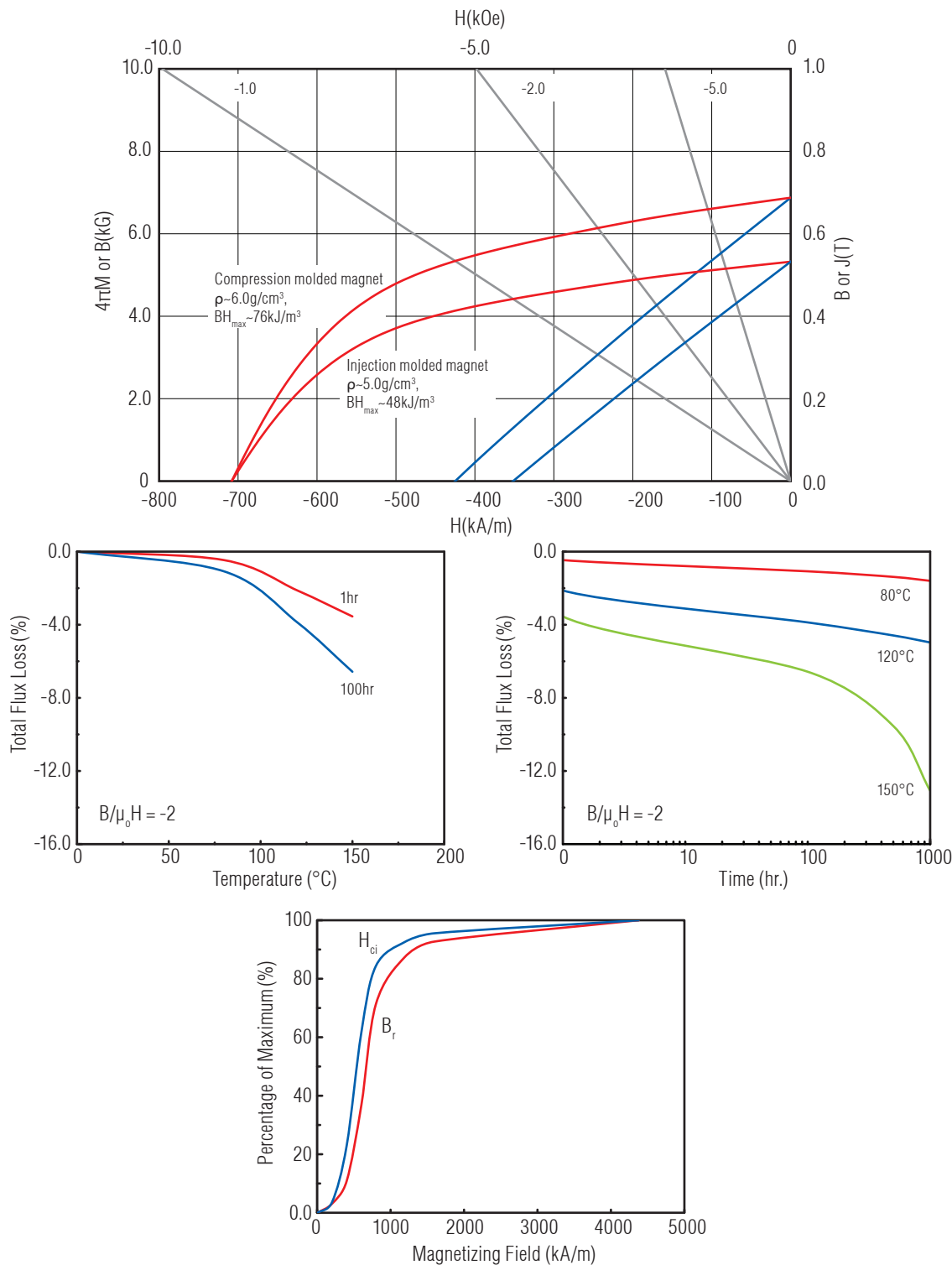
Density (theoretical) 7.59 g/cm³
 Apparent Density 2.81 g/cm³



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

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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: 5,093,076; 5,411,608; 5,645,651; 5,026,438