

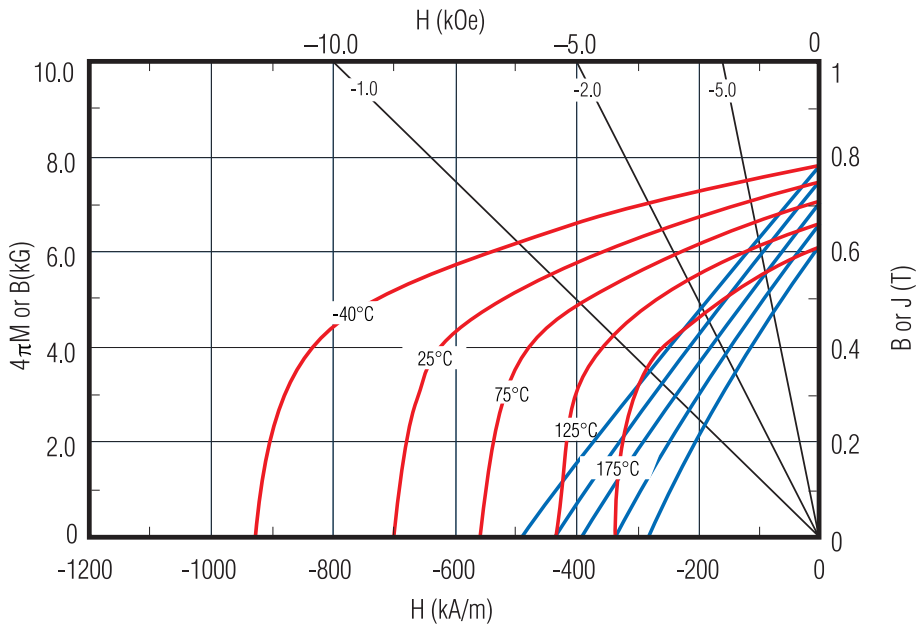
MQP™ -S-11-9-20001-070 ISOTROPIC POWDER*

Material Description

MQP-S-11-9-20001-070 is an isotropic magnet powder having fine particle size and spherical morphology, suitable for the manufacture of bonded magnets, particularly by injection molding, extrusion and calendaring. It is based on a patented Nd-Pr-Fe-Co-Ti-Zr-B alloy. This material is produced by employing an atomization process followed heat treatment.

Powder Magnetic Characteristics¹

		<u>SI</u>	<u>CGS</u>
Specified	Residual Induction, B_r	730-760 mT	7.30-7.60 kG
	Energy Product, $(BH)_{max}$	80-92 kJ/m ³	10.0-11.5 MGOe
	Intrinsic Coercivity, H_{ci}	670-750 kA/m	8.4-9.4 kOe
Typical	Coercive Force, H_c	440 kA/m	5.5 kOe
	Magnetizing Field to >95% Saturation (Min.), H_s	≥1600 kA/m	≥20 kOe
	Temperature coefficient of B_r , α , to 100°C	-0.13 %/°C	
	Temperature coefficient of H_{ci} , β , to 100°C	-0.4 %/°C	
	Curie Temperature, T_c	320 °C	
	Maximum Operating Temperature ²	140-180 °C	
	Maximum Process Temperature ³	350 °C	



Physical Characteristics

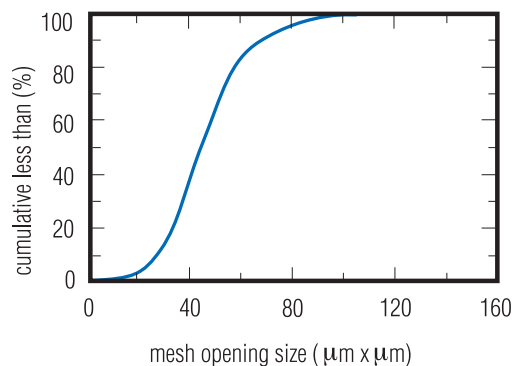
Specified

Laser Diffraction Analysis:

Total > 115 μm	< 0.1 wt. %
Medium Size, d_{50}	35-55 wt. %
Distribution Width (1 sigma)	10-30 wt. %

Typical

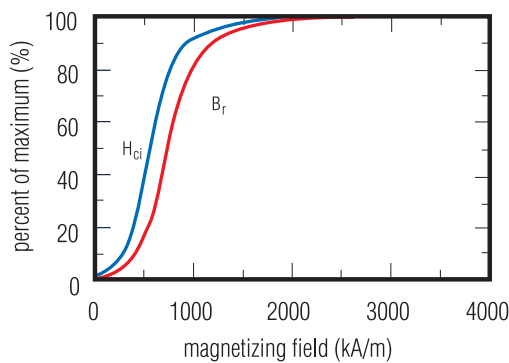
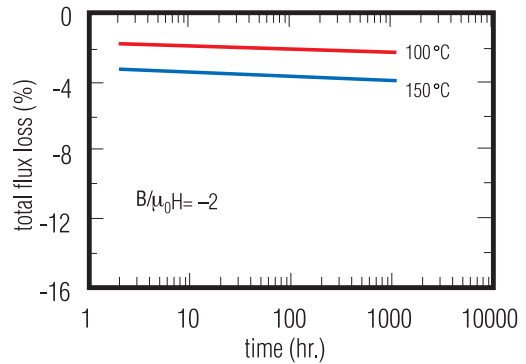
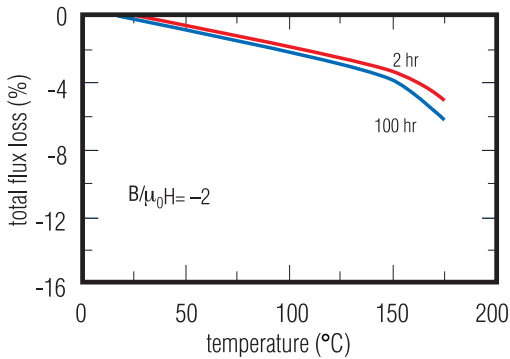
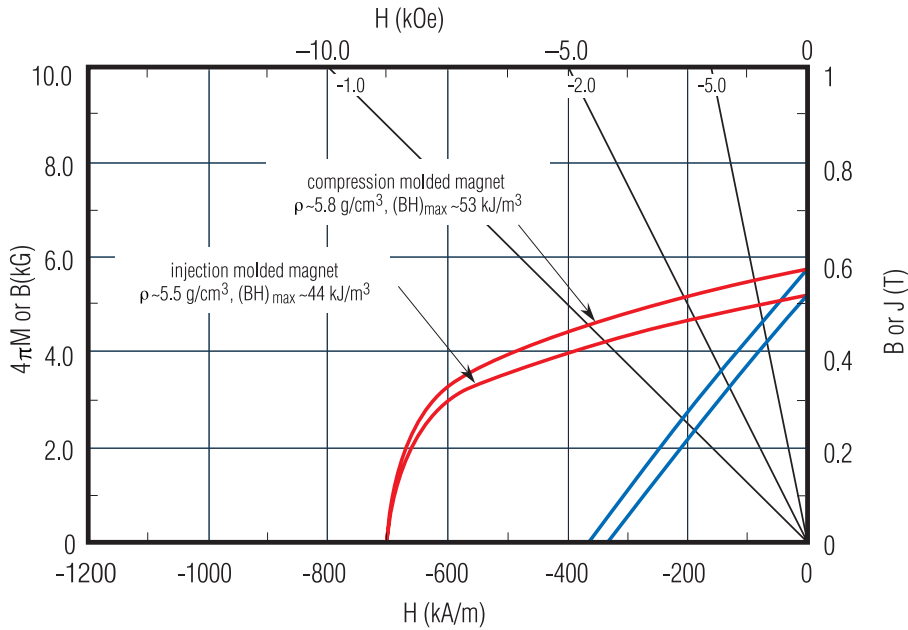
Density (theoretical)	7.43 g/cm ³
Apparent Density	3.6-4.2 g/cm ³



* Contact Magnequench to obtain up-to-date product specifications and for assistance in selecting the ideal product for your application.

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Bonded Magnet Characteristics⁴



¹ Properties measured at 25°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 your local sales representative for more information.
³ Maximum Process Temperature is defined here as <2% reduction in flux (i.e. structural loss) after heating powder 1 hour in air.
⁴ These properties are typical at 25°C and are representative only. Bonded magnet properties are dependent upon powder loading and magnet manufacturing conditions. Contact your local sales representative for information about our products.

These powders, the products that are made therefrom, and their manufacturing processes are subject to one or more of the following United States Patents: 5,172,751; 5,174,362; 5,411,608; 6,302,939; 5,645,651; 6,555,018;