

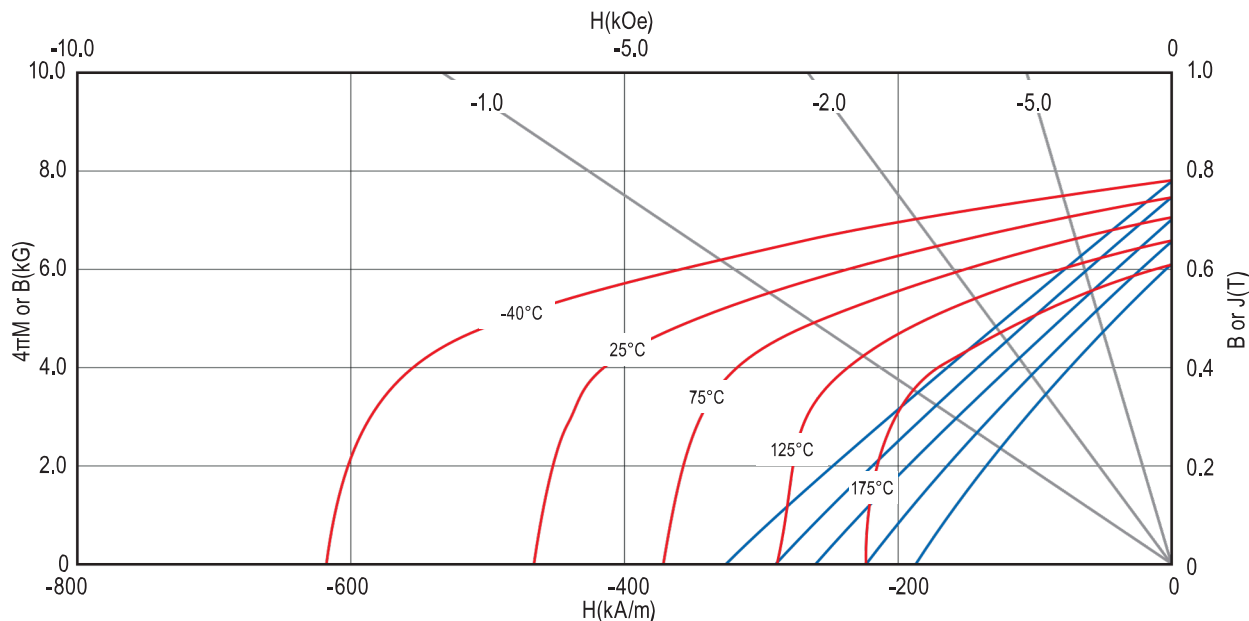
MQP™-S-11-9-20001-070 Isotropic Powder*

Material Description

MQP-S-11-9-20001 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 by heat treatment.

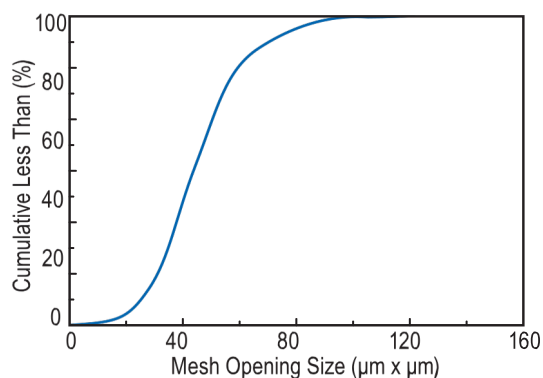
Powder Magnetic Characteristics¹

		SI	CGS
Specified	Residual Induction, B_r	730-760	mT7.30-7.60
	Energy Product, $(BH)_{max}$	80-92	kJ/m ³10.0-11.5
	Intrinsic Coercivity, H_{ci}	670-750	kA/m8.4-9.4
Typical	Magnetizing Field to ≥ 95% Saturation H_s	≥ 1600	kA/m ≥ 20.0
	Temperature coefficient of B_r , α , to 100° C	-0.13	%/°C
	Temperature coefficient of H_{ci} , β , to 100° C	-0.4	%/°C
	Coercive Force, H_c	440	kA/m 5.5
	Curie Temperature, T_c	320	°C
	Maximum Operating Temperature ²	140-180	°C
	Maximum Process Temperature ³	350	°C



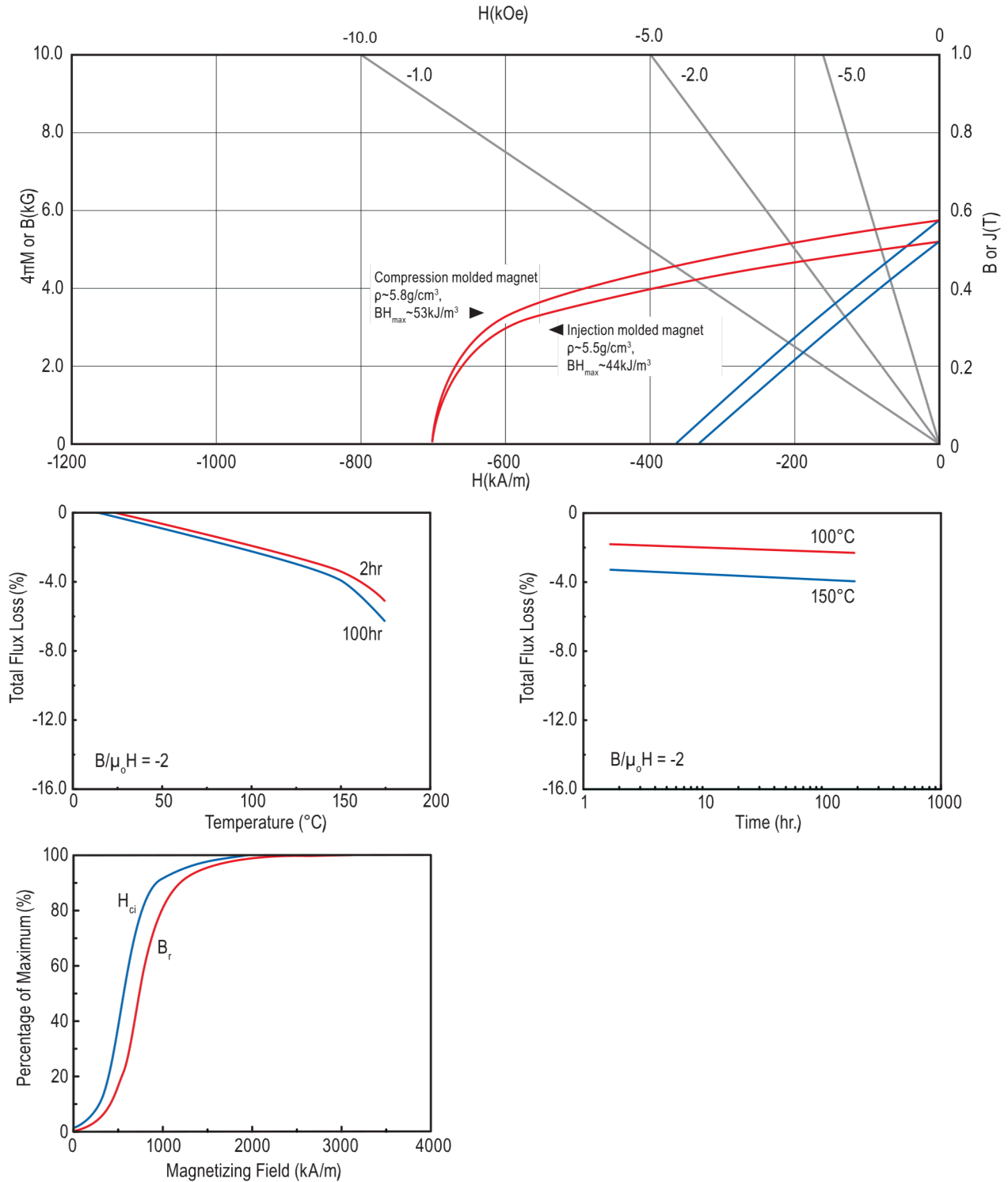
Physical Characteristics

Specified	Laser Diffraction Analysis:	
	Total ≥ 104.7μm	≤ 0.3 wt%
	Median Size, $d_{50\%}$	35-55 μm
	Distribution Width (1 Sigma)	10-30 μm
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.

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 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°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.