

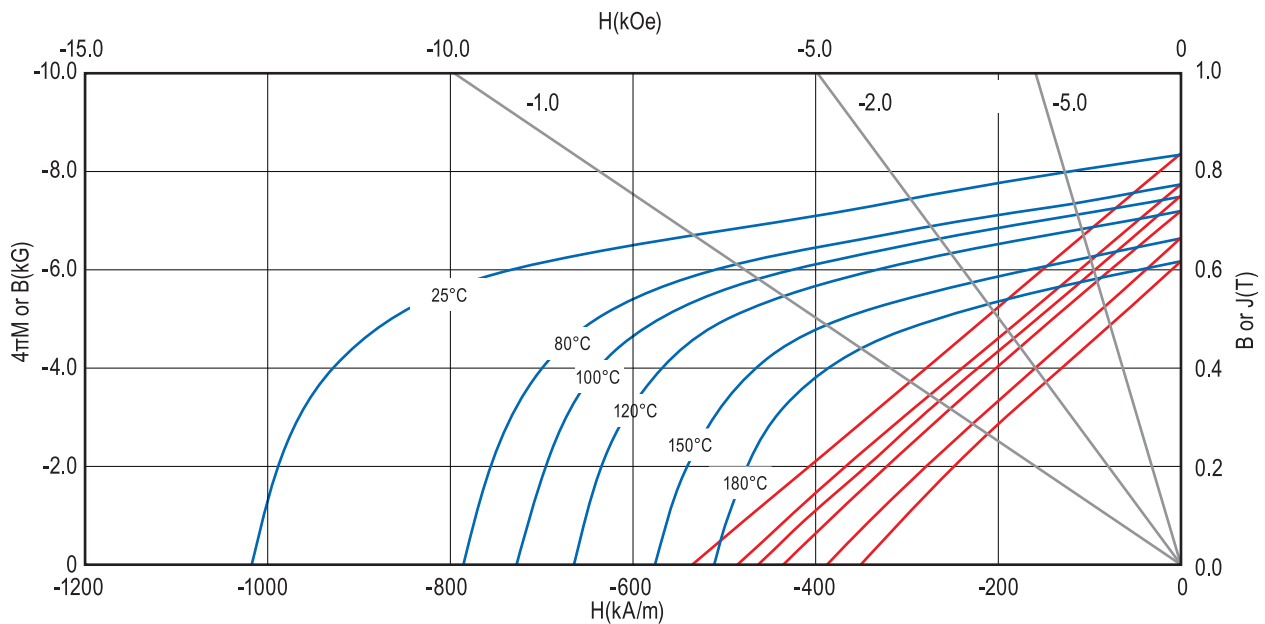
MQP™-14-13-20201 Isotropic Powder*

Material Description

MQP-14-13-20201 is an isotropic powder designed for the manufacture of bonded magnets which maybe be utilized in applications that are subjected to elevated temperatures. Compared to MQP-14-12-20000, it is based on a more cost optimized alloy composition. It has been specifically designed to be used in high temperature applications, such as under-the-hood automotive motors. MQP-14-13-20201 is produced by employing a proprietary rapid solidification process followed by a milling process and heat treatment.

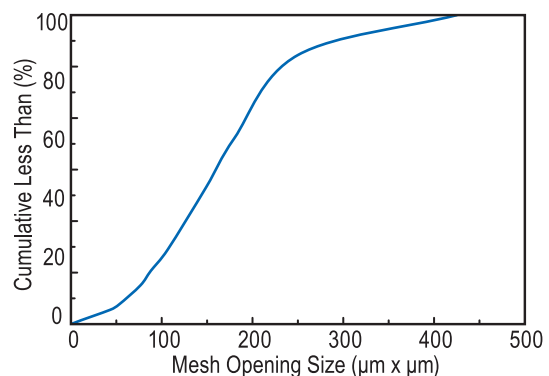
Powder Magnetic Characteristics¹

		SI	CGS
Specified	Residual Induction, B_r	830-850	mT8.30-8.50
	Energy Product, $(BH)_{max}$	109-119	kJ/m ³12.7-15.0
	Intrinsic Coercivity, H_{ci}	985-1045	kA/m12.4-13.1
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	-0.38	%/°C
	Coercive Force, H_c	545	kA/m 6.8
	Curie Temperature, T_c	293	°C
	Maximum Operating Temperature ²	160-170	°C
	Maximum Process Temperature ³	225-250	°C



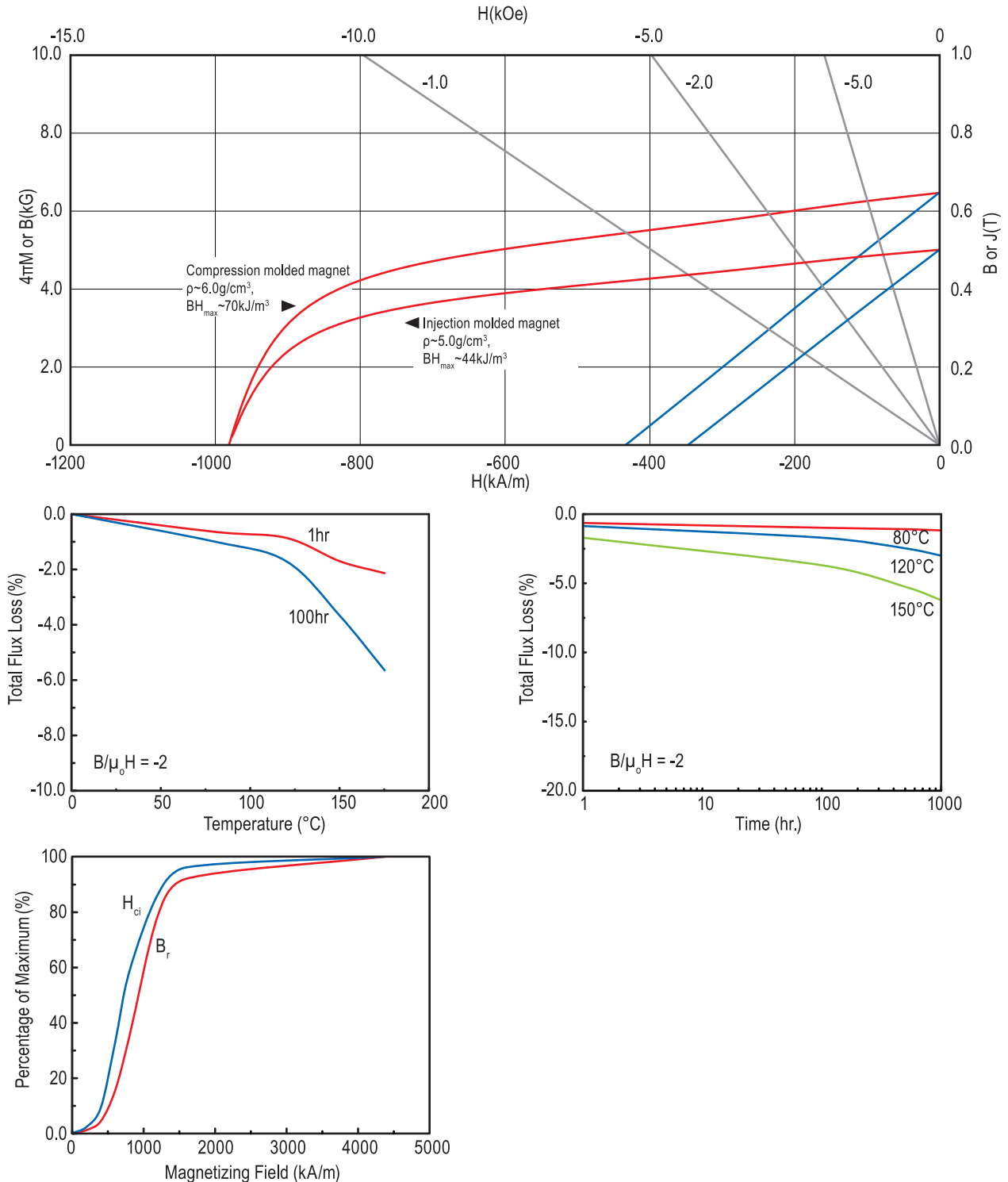
Physical Characteristics

Specified	Sieve Screen Analysis:		
	Total > 40 Mesh (177x177μm opening)	< 0.1wt%	
	Total > 60 Mesh (149x149μm opening)	< 25wt%	
	Total < 270 Mesh (53x53μm opening)	< 12wt%	
Typical	Density (theoretical)	7.60 g/cm ³	
	Apparent Density	2.79 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.