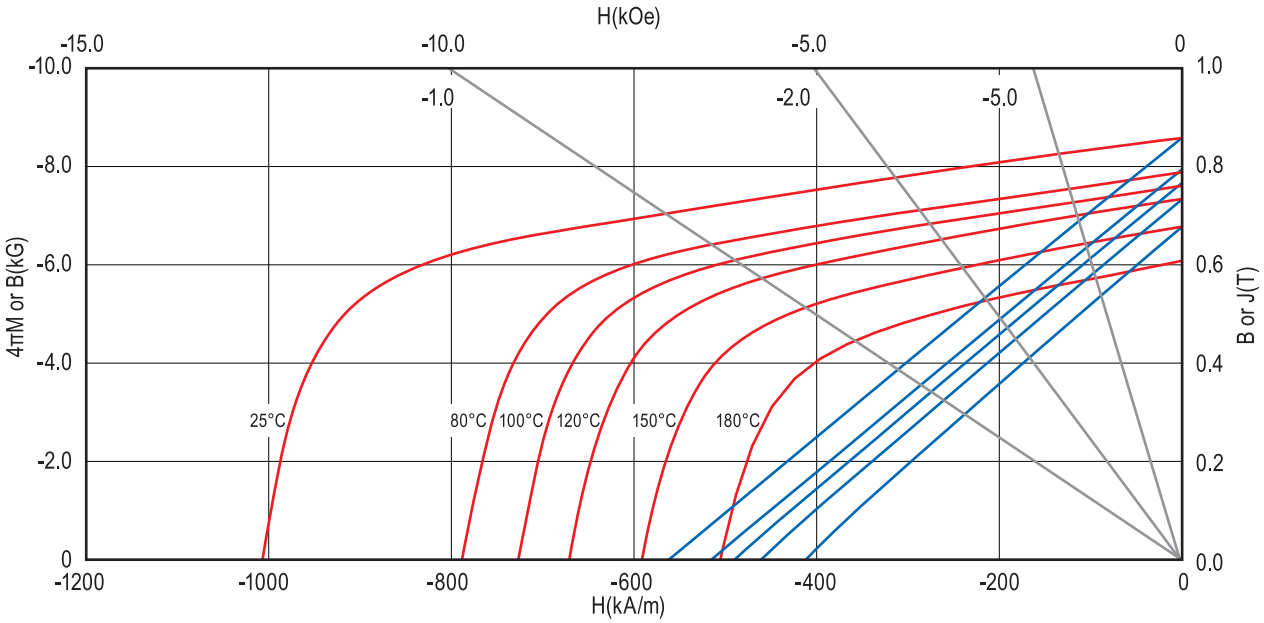
MQP™-15-12-20439 Isotropic Powder*

Material Description

MQP-15-12-20439-070 is a cobalt free isotropic magnetic powder. Designed for high magnetic flux and high temperature applications, such as under-the-hood automotive motors and sensors. This powder utilizes Magnequench "Advanced Quenching (AQ)" powder production technology. Improving upon existing MQP-14-12-20000 by providing higher energy product and remanence without any change in formulation.

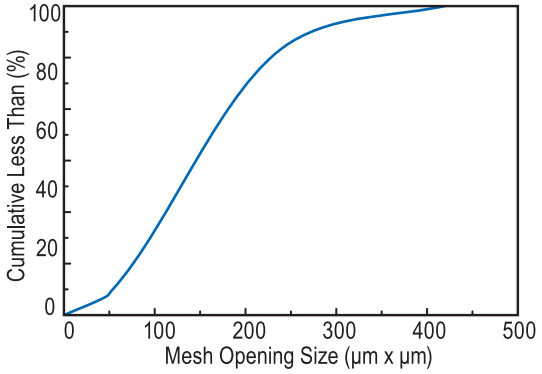
Powder Magnetic Characteristics[1]

		SI		CGS	
Specified	Residual Induction, B_r	850-860	mT	8.50-8.60	kG
	Energy Product, $(BH)_{max}$	118-124	kJ/m^3	14.8-15.6	MGOe
	Intrinsic Coercivity, H_{ci}	950-1030	kA/m	11.9-12.9	kOe
Typical	Coercive Force, H_c	560	kA/m	7.0	kOe
	Magnetizing Field to ≥ 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}, ß, to 100° C	-0.36	%/°C		
	Curie Temperature, T_c	300	°C		
	Maximum Operating Temperature[2]	150-180	°C		
	Maximum Process Temperature[3]	250-275	°C		



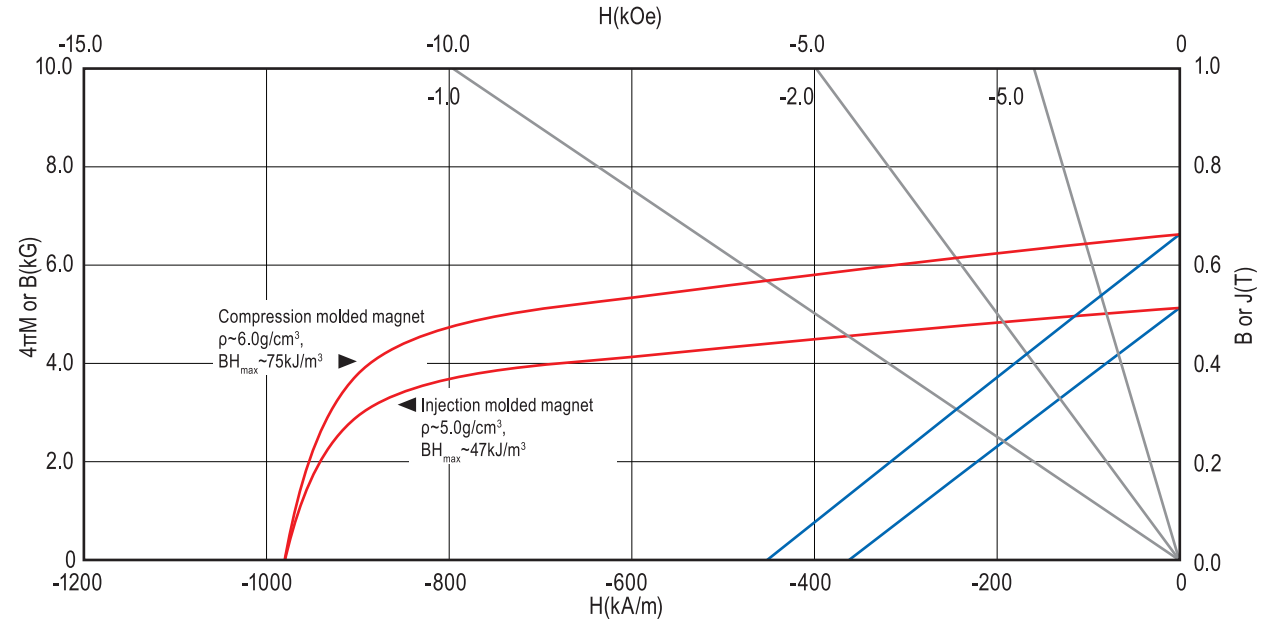
Physcial Characteristics

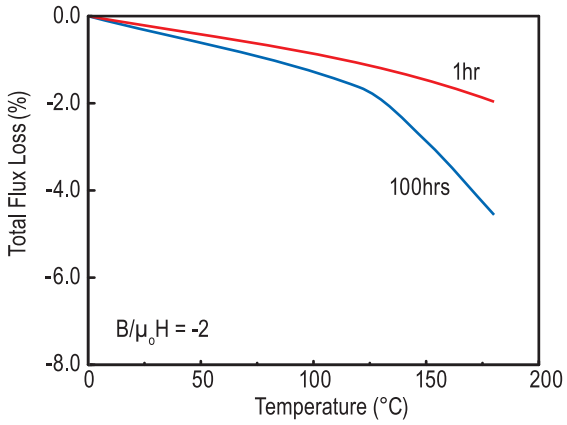
Specified	Sieve Screen Analysis:	
	Total > 40 Mesh (420x420µm opening)	< 0.1wt%
	Total > 60 Mesh (250µmx250µm opening)	< 25wt%
	Total < 270 Mesh (53µmx530µm opening)	< 12wt%
Typical	Density (theoretical)	7.62 g/cm^3
	Apparent Density	2.72 g/cm^3

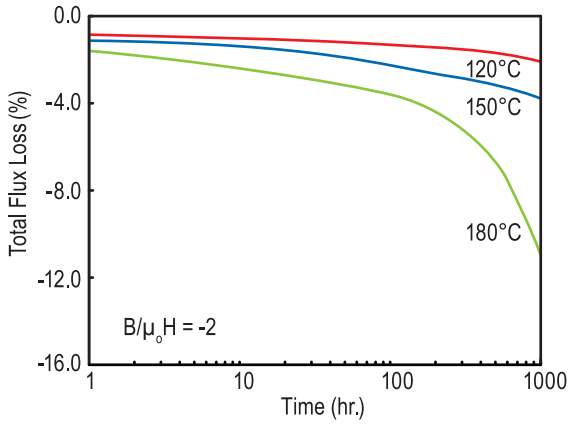


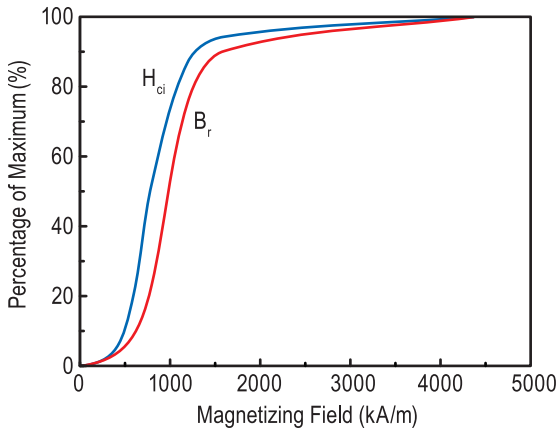
*Contact Magnequench to obtain up-to-date product specifications.

Bonded Magnet Characteristics[4]









[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.