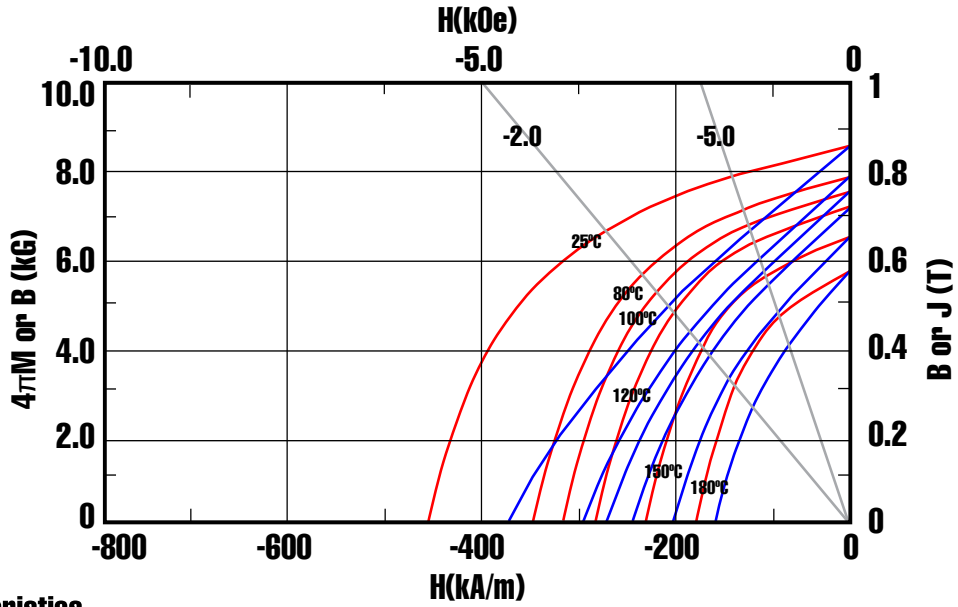
MQP™-12-5-20092-070 ISOTROPIC POWDER*

Material Description

MQP-12-5-20092-070 is a low-cost powder designed for use in cost-sensitive applications that require magnetic properties in between typical ferrite and isotropic bonded neo magnet properties. Both its energy product and its intrinsic coercivity are lower than any other MQP grade powder. This combined with its Nd-Pr-Ce-Fe-B alloy enables MQP-12-5-20092-070 to be especially well-suited for ferrite replacement applications, such as air conditioner louver motors. MQP-12-5-20092-070 is produced by employing a proprietary rapid solidification process followed by a milling process and heat treatment.

Powder Magnetic Characteristics[1]

		SI	CGS
Specified	Residual Induction, B_r	840 - 870 mT	8.40 – 8.70 kG
	Energy Product, $(BH)_{max}$	91 - 101 kJ/m^3	11.4 – 12.7 MGOe
	Intrinsic Coercivity, H_{ci}	420 - 480 kA/m	5.3 - 6.0 kOe
Typical	Coercive Force, H_c	365 kA/m	4.6 kOe
	Magnetizing Field to >95% Saturation (Min.), H_s	≥1270 kA/m	≥16 kOe
	Temperature coefficient of B_r, α, to 100°C	-0.16 %/°C	
	Temperature coefficient, H_{ci}, β, to 100°C	-0.42 %/°C	
	Curie Temperature, T_C	272 °C	
	Maximum Operating Temperature[2]	80 - 100 °C	
	Maximum Process Temperature[3]	250 - 275 °C	



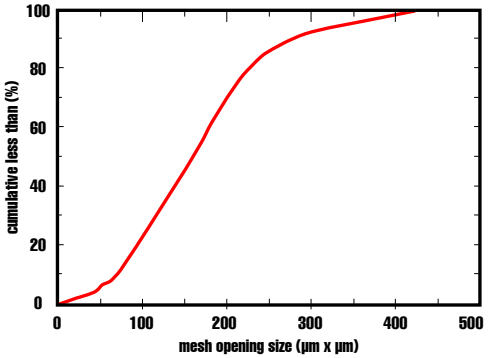
Physical Characteristics

Specified

Sieve Screen Analysis:
Total > 40 Mesh (420x420µm opening).....< 0.1 wt.%
Total > 60 Mesh (250x250µm opening).....< 25 wt.%
Total < 270 Mesh (53x53µm opening).....< 12 wt.%

Typical

Density (theoretical).....7.64 g/cm^3
Apparent Density.....2.74 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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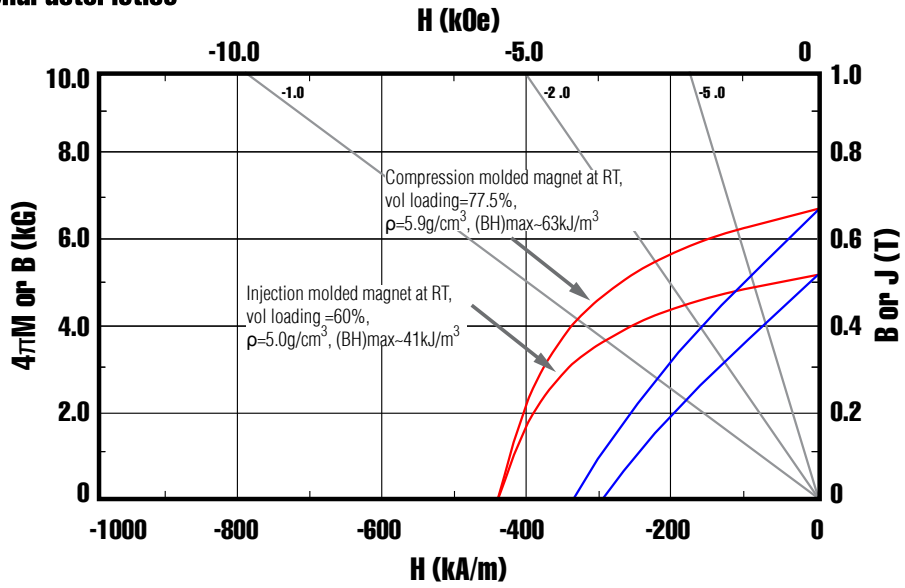
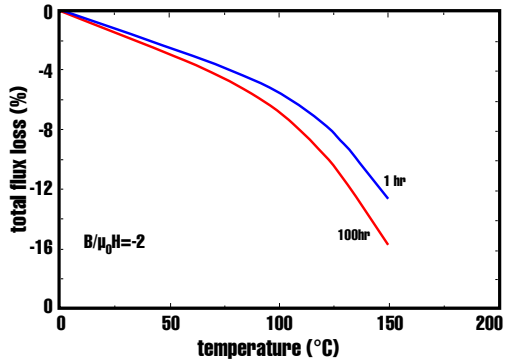
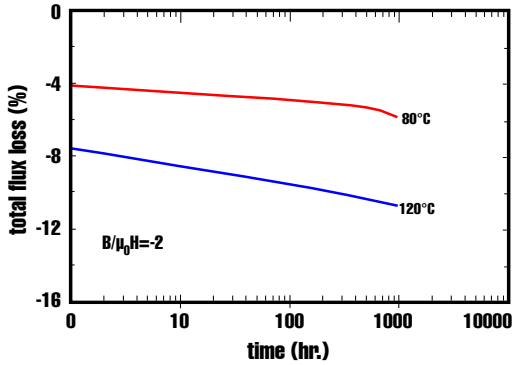
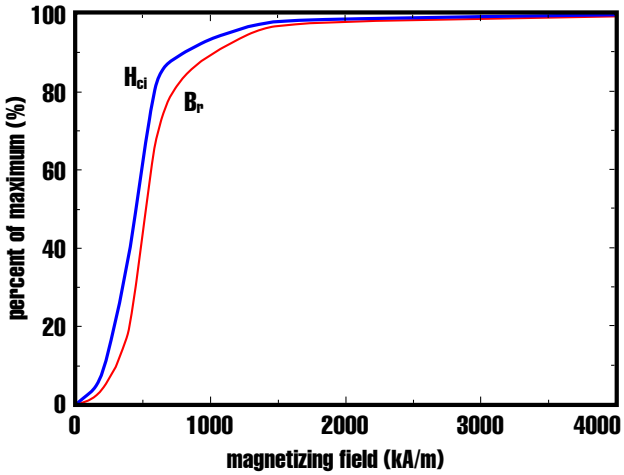
Bonded Magnet Characteristics[4]









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 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.