

Material Characteristics (11)

	Symbol	Unit	Measuring Conditions			Low η_B Materials		
			Freq.	Flux den.	Temp.	N4	N42	N43
Initial Permeability	μ_i		$\leq 10\text{kHz}$	0.25mT	25°C	2500 \pm 25%	3800 \pm 25%	750 \pm 25%
Relative Loss Factor	$\tan\delta/\mu_i$	10^{-6}	10kHz	$< 0.25\text{mT}$	25°C	< 7	< 3.5	< 60
			100kHz		25°C	< 3	< 3.5	< 15
Saturation Flux Density	B_s	mT	10kHz	$H = 1200\text{A/m}$	25°C	450	530	490
					100°C	320	425	400
Remanence	B_r	mT	10kHz	$H = 1200\text{A/m}$	25°C	180	100	400
					100°C	150	125	325
Coercivity	H_c	A/m	10kHz	$H = 1200\text{A/m}$	25°C	14	9	35
					100°C	9	13	21
Temperature Factor of Permeability	α_F	$10^{-6}/^\circ\text{C}$	10kHz	$< 0.25\text{ mT}$	5 ~ 25°C	< 1.3	7 ~ 9	< 2.2
					25 ~ 55°C	< 1.3	-4 ~ -2	< 1.8
Hysteresis Material Constant	η_B	$10^{-6}/\text{mT}$	10kHz	1.5-3.0mT	25°C	< 0.6	< 0.3	< 2.5 (100kHz)
Curie Temperature	T_c	°C				≥ 170	≥ 250	≥ 250
Resistivity	ρ	Ωm				7.50	5.00	2.00
Density	d	g/cm^3				4.70	4.90	4.70

Note: Material characteristics are typical for a toroid core.

Product specification will differ from these data due to the influence of geometry and size.