Catalogue: Ferrite Magnets (1)

Material Code				TF	THD3G		THD3N	
Composition				Ba ferrite	Sr ferrite			
Orientation				Isotropic	Anisotropic			
Press			Dry / Wet	Dry				
			Aspect	Granule	Powder	Granule	Granule	
			Orientation	---	Axial	Radial	Radial	Multiple
Magnetic properties [min/max]	Test piece			as pressed granule	as pressed powder			
	Residual induction Br		[mT]	220 / 240	375 / 400		380 / 410	
			[G]	2,200 / 2,400	3,750 / 4,000		3,800 / 4,100	
	Coercive force Hcb		[kA/m]	127 / 160	238 / 271		222 / 263	
			[Oe]	1,600 / 2,000	3,000 / 3,400		2,800 / 3,300	
	Intrinsic coercive force Hcj		[kA/m]	254 / 287	254 / 291		234 / 279	
			[Oe]	3,200 / 3,600	3,200 / 3,650		2,950 / 3,500	
	Maximum energy product (BH)max		[kJ/m^3]	7.1 / 9.6	26.2 / 30.3		27.0 / 31.9	
			[MG·Oe]	0.9 / 1.2	3.3 / 3.8		3.4 / 4.0	
Physical properties [min/max]	Specific heat		[cal/g·°C]	0.15 / 0.20	0.15 / 0.20		0.15 / 0.20	
	Density		[g/cm^3]	4.70 / 5.10	4.70 / 5.10		4.70 / 5.10	
	Isotopic thermal expansion coefficient		[10^{-6} °C]	9 / 12	---		---	
	Anisotopic thermal expansion coefficient		// [10^{-6} °C]	---	14 / 15		14 / 15	
			⊥ [10^{-6} °C]	---	9 / 10		9 / 10	
	Flexural strength		[kgf/mm^2]	5 / 9	5 / 9		5 / 9	
			[MPa]	50 / 90	50 / 90		50 / 90	
	Compressive strength		[kgf/mm^2]	> 70	> 70		> 70	
			[MPa]	> 690	> 690		> 690	
	Recoil relative permiability		[μ_{rec}]	1.05 / 1.20	1.05 / 1.20		1.05 / 1.20	
	Temperature coefficient	ΔBr/Br	[%/°C]	-0.18 / -0.19	-0.18 / -0.19		-0.18 / -0.19	
		ΔHc/Hc	[%/°C]	+0.35 / +0.50	+0.35 / +0.50		+0.35 / +0.50	
	Curie temperature		[°C]	450 / 460	450 / 460		450 / 460	

Material Code				THD4	THW5B	THW6B
Composition				Sr ferrite		
Orientation				Anisotropic		
Press			Dry / Wet	Dry	Wet	
			Aspect	Powder	Slurry	
			Orientation	Axial		
Magnetic properties [min/max]	Test piece			as pressed powder		
	Residual induction Br		[mT]	390 / 410	410 / 430	410 / 430
			[G]	3,900 / 4,100	4,100 / 4,300	4,100 / 4,300
	Coercive force Hcb		[kA/m]	222 / 259	242 / 275	286 / 311
			[Oe]	2,800 / 3,250	3,050 / 3,450	3,600 / 3,900
	Intrinsic coercive force Hcj		[kA/m]	230 / 271	250 / 283	302 / 327
			[Oe]	2,900 / 3,400	3,150 / 3,550	3,800 / 4,100
	Maximum energy product (BH)max		[kJ/m^3]	28.6 / 31.9	31.8 / 35.1	31.8 / 35.1
			[MG·Oe]	3.6 / 4.0	4.0 / 4.4	4.0 / 4.4
Physical properties [min/max]	Specific heat		[cal/g·°C]	0.15 / 0.20	0.15 / 0.20	0.15 / 0.20
	Density		[g/cm^3]	4.80 / 5.10	4.80 / 5.10	4.80 / 5.10
	Isotopic thermal expansion coefficient		[10^{-6} °C]	---	---	---
	Anisotopic thermal expansion coefficient		// [10^{-6} °C]	14 / 15	14 / 15	14 / 15
			⊥ [10^{-6} °C]	9 / 10	9 / 10	9 / 10
	Flexural strength		[kgf/mm^2]	5 / 9	5 / 9	5 / 9
			[MPa]	50 / 90	50 / 90	50 / 90
	Compressive strength		[kgf/mm^2]	> 70	> 70	> 70
			[MPa]	> 690	> 690	> 690
	Recoil relative permiability		[μ_{rec}]	1.05 / 1.20	1.05 / 1.20	1.05 / 1.20
	Temperature coefficient	ΔBr/Br	[%/°C]	-0.18 / -0.19	-0.18 / -0.19	-0.18 / -0.19
		ΔHc/Hc	[%/°C]	+0.35 / +0.50	+0.35 / +0.50	+0.35 / +0.50
	Curie temperature		[°C]	450 / 460	450 / 460	450 / 460

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Catalogue: Ferrite Magnets (2)

Material Code			THD5D	
Composition			LaCo-doped Sr ferrite (under development)	
Orientation			Anisotropic	
Press		Dry / Wet	Dry	
		Aspect	Powder	Granule
		Orientation	Axial	Multiple
Magnetic properties [min/max]	Test piece		as pressed powder	
	Residual induction Br	[mT]	405 / 425	
		[G]	4,050 / 4,250	
	Coercive force Hcb	[kA/m]	234 / 275	
		[Oe]	2,950 / 3,450	
	Intrinsic coercive force Hcj	[kA/m]	246 / 287	
		[Oe]	3,100 / 3,600	
	Maximum energy product (BH)max	[kJ/m^3]	31.0 / 34.3	
		[MG·Oe]	3.9 / 4.3	
Physical properties [min/max]	Specific heat	[cal/g·°C]	0.15 / 0.20	
	Density	[g/cm^3]	4.9 / 5.1	
	Isotopic thermal expansion coefficient	[10^{-6} °C]	---	
	Anisotopic thermal expansion coefficient	// [10^{-6} °C]	14 / 15	
		⊥ [10^{-6} °C]	9 / 10	
	Flexural strength	[kgf/mm^2]	5 / 9	
		[MPa]	50 / 90	
	Compressive strength	[kgf/mm^2]	> 70	
		[MPa]	> 690	
	Recoil relative permiability	[μ_{rec}]	1.05 / 1.20	
	Temperature coefficient	ΔBr/Br [%/°C]	-0.18 / -0.19	
		ΔHc/Hc [%/°C]	+0.20 / +0.30	
	Curie temperature	[°C]	450 / 460	

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