

## Main Physical & Mechanical Properties of Sintered Ferrite Magnet

Material Grade		SFM-1A,I*	SFM-2A	SFM-2B	SFM-3A	SFM-3B	SFM-3C	SFM-3D	SFM-4A	SFM-4B	SFM-4C	SFM-4D	SFM-4E	SFM-4F	SFM-4G	SFM-5A	SFM-5B	SFM-5C	SFM-6A	SFM-6B	SFM-6C	SFM-6D
Recoil Permeability	/	1.1-1.2	1.05 - 1.10	1.10 - 1.20	1.10 - 1.20	1.10 - 1.20	1.10 - 1.20	1.05-1.10	1.10 - 1.20	1.10 - 1.20	1.10 - 1.20	1.05-1.10	1.05-1.10	1.05-1.10	1.05-1.10	1.10-1.20	1.10-1.20	1.05-1.10	1.05-1.10	1.05-1.10	1.05-1.10	1.05-1.10
Curie Temp.	°C	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
Working Temp. Range	°C	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250	-40+250
Density	g/cm <sup>3</sup>	4.6-4.8	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0	4.8-5.0
Vickers Hardness	Hv	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600	500-600
Elasticity Modulus	10 <sup>3</sup> N/mm <sup>2</sup>	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180	150-180
Flexural Strength	N/mm <sup>2</sup>	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100
Compressive Strength	N/mm <sup>2</sup>	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900	700-900
Coeff. of Thermal Expansion	C ⊥	10 <sup>-6</sup> /°C	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11
	C //	10 <sup>-6</sup> /°C	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15	13-15
Specific Electric Resistance	Ωm	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>	10x10 <sup>5</sup>
Specific Heat Capacity	J/(kg.°C)	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850
Thermal Conductivity	W/(m.°C)	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5

Remark: I\* means isotropic magnet, other grades are of anisotropic magnet.