



## WPMAG<sup>®</sup> Injection molding particles for bonded magnet

**Magnetic Powder: Anisotropic Ferrite+SmFeN**

**Bonded Resin: PA12**

**(SmFeN all provided by the invention patent holder MagValley)**

Grade	Test Method	Unit	SF220	SF230	SF240	SF250	SF260
<b>Magnetic Properties</b>							
Residual Flux Density(Br)	BH Curve Tracer	mT (Gs)	350-370	350-370	400-450	450-500	500-540
			(3.5-3.7)	(3.7-4.0)	(4.0-4.5)	(4.5-5.0)	(5.0-5.4)
Coercive Force(Hcb)		kA/m (Oe)	207-255	239-286	255-302	286-334	302-358
			(2.6-3.2)	(3.0-3.6)	(3.2-3.8)	(3.6-4.2)	(3.8-4.5)
Intrinsic Coercive Force(Hcj)		kA/m (Oe)	286-358	342-438	438-573	477-597	557-676
			(3.6-4.5)	(4.3-5.5)	(5.5-7.2)	(6.0-7.5)	(7.0-8.5)
Maximum Energy Product(BH)max	kJ/m <sup>3</sup> (MGOe)	20-23	24-28	28-36	36-44	44-52	
		(2.5-2.9)	(3.0-3.5)	(3.5-4.5)	(4.5-5.5)	(5.5-6.5)	
<b>Physical Properties</b>							
Tensile Strength	ASTM D-638	MPa	28-35	28-35	28-35	28-35	28-35
Flexural Strength	ASTM D-790	MPa	45-90	45-90	45-90	45-90	45-90
Flexural Modulus	ASTM D-790	MPa	8000-15000	8000-15000	8000-15000	8000-15000	8000-15000
Izod Impact Strength	ASTM D-256	kJ/m <sup>2</sup>	8-25	8-25	8-25	8-25	8-25
Density	ASTM D-792	g/cm <sup>3</sup>	3.8-4.0	3.9-4.1	4.0-4.2	4.0-4.2	4.1-4.3
Water Absorption	ASTM D-570	%	0.04-0.2	0.04-0.2	0.04-0.2	0.04-0.2	0.04-0.2
Melt Flow Rate 270°C/10Kg	ASTM D-1238	g/10min	120-280	120-280	120-280	120-280	120-280
Flammability	UL94	Class	V-HB	V-HB	V-HB	V-HB	V-HB
<b>Injection Molding Conditions</b>		<b>Recommended Injection Molding Parameters</b>					
Pre-drying Temperature	°C		80-90	80-90	80-90	80-90	80-90
Pre-drying Time	hr		3-4	3-4	3-4	3-4	3-4
Injection Temperature	°C		210-230	210-230	210-230	210-230	210-230
Mold Temperature	°C		80-100	80-100	80-100	80-100	80-100
Injection Pressure	MPa		55-100	55-100	55-100	55-100	55-100
Injection Speed	V%		40-80	40-80	40-80	40-80	40-80



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