



WPMAG[®] Injection molding particles for bonded magnet

Magnetic Powder: SmFeN

Bonded Resin: PA12

(SmFeN all provided by the invention patent holder MagValley)

Grade	Test Method	Unit	S280	S290	S2100	S2110	S2120
Magnetic Properties							
Residual Flux Density(Br)	BH Curve Tracer	mT (Gs)	600-680	630-700	650-720	680-740	700-750
			(6.0-6.8)	(6.3-7.0)	(6.5-7.2)	(6.8-7.4)	(7.0-7.5)
Coercive Force(Hcb)		kA/m (Oe)	342-398	358-438	424-464	438-477	462-493
			(4.3-5.0)	(4.5-5.5)	(5.3-5.8)	(5.5-6.0)	(5.8-6.2)
Intrinsic Coercive Force(Hcj)		kA/m (Oe)	557-637	557-716	557-732	597-756	597-796
			(7.0-8.0)	(7.0-9.0)	(7.0-9.2)	(7.5-9.5)	(7.5-10.0)
Maximum Energy Product(BH)max		kJ/m ³ (MGOe)	60-72	72-80	80-88	88-96	96-103
			(7.5-9.0)	(9.0-10.0)	(10.0-11.0)	(11.0-12.0)	(12.0-13.0)
Physical Properties							
Tensile Strength	ASTM D-638	MPa	35-55	35-55	35-55	35-55	35-55
Flexural Strength	ASTM D-790	MPa	65-90	65-90	65-90	65-90	65-90
Flexural Modulus	ASTM D-790	MPa	8000-15000	8000-15000	8000-15000	8000-15000	8000-15000
Izod Impact Strength	ASTM D-256	kJ/m ²	8-15	8-15	8-15	8-15	8-15
Density	ASTM D-792	g/cm ³	4.2-4.6	4.3-4.6	4.4-4.7	4.5-4.7	4.5-4.7
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
Injection Molding Conditions		Recommended Injection Molding Parameters					
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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