

Injection Bonded Magnets

- Thermoplastic / magnetic powder injection moulding production process
- Chemical composition: NdFeB or SrFe powder / thermoplastic carrier
- Allows possibility of combining other components with magnet during production
- Excellent option when producing complicated shapes
- Good resistance to corrosion and chipping
- Allows very flexible magnetisation options



Typical Magnetic Properties

Material	Grade	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
		Br(mT)	Br(Gs)	bHc(kA/m)	bHc(Oe)	lHc(kA/m)	lHc(Oe)	(BH)max(KJ/m ³)	(BH)max(MGOe)
Injection Bonded Ferrite Magnets	PBF-10	220-240	2,200-2,400	145-165	1,800-2,060	190-225	2,375-2,810	9.0-10.6	1.13 - 1.33
	PBF-11	230-250	2,300-2,500	160-185	2,000-2,310	225-260	2,810-3,250	10.0-12.0	1.25 - 1.50
	PBF-13	250-270	2,500-2,700	175-195	2,180-2,440	200-230	2,500-2,875	11.5-14.5	1.44 - 1.82
	PBF-15	270-290	2,700-2,900	175-195	2,180-2,440	200-230	2,500-2,875	14.5-16.5	1.82 - 2.07
Bonded NdFeB Magnets	PBN-6	520-600	5,200-6,000	304-360	3,800-4,500	640-800	8,000-10,000	40-56	5 - 7
	PBN-8	600-650	6,000-6,500	360-440	4,500-5,500	640-960	8,000-12,000	56-72	7 - 9
	PBN-10	650-700	6,500-7,000	360-464	4,500-5,800	640-960	8,000-12,000	72-80	9 - 10
	PBN-12	700-760	7,000-7,600	424-480	5,300-6,000	640-880	8,000-11,000	80-96	10-12
	PBN-8H	550-620	5,500-6,200	400-488	5,000-6,000	960-1,280	12,000-16,000	48-72	6-9

Flexible Magnets

- Thermoplastic / magnetic powder calendaring / extrusion production process
- Chemical composition: SrFe powder/ thermoplastic carrier
- Good resistance to demagnetisation
- Good resistance to chemical agents/ solvents
- Available in sheets / strips / profiles
- Can be stamped / slit / punched/ laminated
- Varied applications across a broad range of industries



Typical Magnetic Properties

Material	Iso/ Anisotropic	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
		Br(mT)	Br(Gs)	bHc(kA/m)	bHc(Oe)	lHc(kA/m)	lHc(Oe)	(BH)max(KJ/m ³)	(BH)max(MGOe)
Flex-7L	Isotropic	165+/-10	1,650+/-100	108+/-8	1,350+/-100	132+/-8	1,650+/-100	5.2+/-0.4	0.65+/-0.05
Flex-7H	Isotropic	170+/-10	1,700+/-100	112+/-8	1,400+/-100	136+/-8	1,700+/-100	5.6+/-0.4	0.70+/-0.05
Flex-10	Semi-aniso	220+/-5	2,200+/-50	136+/-8	1,700+/-100	160+/-8	2,000+/-100	8.0+/-0.4	1.00+/-0.05
Flex-12	Anisotropic	245+/-5	2,450+/-50	140+/-8	1,750+/-100	148+/-8	1,850+/-100	11.2+/-0.4	1.40+/-0.05
Flex-12BH	Anisotropic	247.5+/-2.5	2,475+/-25	168+/-8	2,100+/-100	224+/-8	2,800+/-100	12.0+/-0.4	1.50+/-0.05

Notes:



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Product Information Summary



'Australia's Leading Supplier of Permanent Magnets'

COMPANY PROFILE

AMFmagnetics is Australia's leading supplier of permanent magnets, servicing customers in the aerospace, manufacturing, mining, automotive, engineering, electronics, craft, therapeutic, signage, display, shop-fitting and printing industries, both domestically and internationally.

AMFmagnetics carries the largest stock range of magnets in Australia (Over 400 different sizes and grades of Neodymium, Samarium Cobalt, Alnico and Ferrite magnets).

In addition to these stock products, our exclusive supply partnerships with a number of Asia, Europe and America's leading magnet producers, allows us to produce large and small orders of custom made magnets in the shortest time possible. These can be produced to exacting specifications and tolerances, utilising the latest technology and grades, tailor made for critical applications.

Our technical team is always on hand to answer your questions on design issues and performance tolerances in order to supply the optimal magnet for your application. Our shipping department will manage every aspect of the logistics chain, from factory floor to your door, allowing us to ship goods (both local, interstate and international) efficiently, ensuring that your orders are expedited in the shortest possible time.

Ferrite Magnets

- Sintered (powder metallurgical) production process
- Chemical composition: $Sr_{0.6}Fe_2O_3$
- Relatively hard & brittle
- Good resistance to demagnetisation
- Excellent resistance to corrosion
- Excellent temperature stability
- Abundant raw material providing Excellent low cost option



Typical Magnetic Properties

Material	Iso/ Anisotropic	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
		Br(mT)	Br(Gs)	bHc(kA/m)	bHc(Oe)	iHc(kA/m)	iHc(Oe)	(BH)max(KJ/m ³)	(BH)max(MGOe)
Y10	Isotropic	200-235	2,000-2,350	125-160	1,570-2,010	210-280	2,640-3,520	6.5-9.5	0.8-1.2
Y25	Anisotropic	360-400	3,600-4,000	135-170	1,700-2,140	140-200	1,760-2,510	22.5-28.0	2.8-3.5
Y30	Anisotropic	370-400	3,700-4,000	175-210	2,200-2,640	180-220	2,260-2,770	26.0-30.0	3.3-3.8
Y30BH	Anisotropic	380-400	3,800-4,000	230-275	2,890-3,460	235-290	2,950-3,650	27.0-32.5	3.4-4.1
Y33	Anisotropic	410-430	4,100-4,300	220-250	2,770-3,140	225-255	2,830-3,210	31.5-35.0	4.0-4.4
Y35	Anisotropic	400-420	4,000-4,200	160-190	2,010-2,380	165-195	2,070-2,450	30.0-33.5	3.8-4.2

Neodymium Magnets

- Sintered (powder metallurgical) production process
- Chemical composition: $Nd_2Fe_{14}B$
- Very hard & brittle
- Excellent resistance to demagnetisation
- Poor resistance to corrosion
- Good temperature stability
- High performance material provides excellent cost to performance ratio



Typical Magnetic Properties

Grade	Maximum Operating Temperature	Remanence				Coercivity		Intrinsic Coercivity		Max. Energy Product			
		Br(T)		Br(kGs)		bHc(kA/m)	bHc(Oe)	iHc(kA/m)	iHc(Oe)	(BH)max(KJ/m ³)		(BH)max(MGOe)	
		Max.	Min.	Max.	Min.					Max.	Min.	Max.	Min.
N30	<=80	1.17	1.09	11.7	10.9	>=796	>=10.0	>=955	>=12	255	223	32	28
N33	<=80	1.22	1.14	12.2	11.4	>=836	>=10.5	>=955	>=12	279	247	35	31
N35	<=80	1.25	1.18	12.5	11.8	>=859	>=10.8	>=955	>=12	294	263	37	33
N38	<=80	1.30	1.23	13.0	12.3	>=859	>=10.8	>=955	>=12	318	286	40	36
N40	<=80	1.32	1.26	13.2	12.6	>=836	>=10.5	>=955	>=12	334	302	42	38
N42	<=80	1.35	1.30	13.5	13.0	>=836	>=10.5	>=955	>=12	350	318	44	40
N45	<=80	1.38	1.32	13.8	13.2	>=836	>=10.5	>=875	>=11	366	334	46	42
N48	<=80	1.43	1.37	14.3	13.7	>=836	>=10.5	>=875	>=11	390	358	49	45
N50	<=80	1.46	1.40	14.6	14.0	>=836	>=10.5	>=875	>=11	406	374	51	47
N30M	<=100	1.17	1.09	11.7	10.9	>=812	>=10.2	>=1,114	>=14	255	223	32	28
N33M	<=100	1.22	1.14	12.2	11.4	>=851	>=10.7	>=1,114	>=14	279	247	35	31
N35M	<=100	1.25	1.18	12.5	11.8	>=875	>=11.0	>=1,114	>=14	294	263	37	33
N38M	<=100	1.30	1.23	13.0	12.3	>=915	>=11.5	>=1,114	>=14	318	286	40	36
N40M	<=100	1.32	1.26	13.2	12.6	>=939	>=11.8	>=1,114	>=14	334	302	42	38
N42M	<=100	1.35	1.30	13.5	13.0	>=955	>=12.0	>=1,114	>=14	350	318	44	40
N45M	<=100	1.38	1.32	13.8	13.2	>=971	>=12.0	>=1,114	>=14	366	334	46	42
N27H	<=120	1.11	1.02	11.1	10.2	>=780	>=9.8	>=1,353	>=17	231	199	29	25
N30H	<=120	1.17	1.09	11.7	10.9	>=812	>=10.2	>=1,353	>=17	255	223	32	28
N33H	<=120	1.22	1.14	12.2	11.4	>=851	>=10.7	>=1,353	>=17	279	247	35	31
N35H	<=120	1.25	1.18	12.5	11.8	>=875	>=11.0	>=1,353	>=17	294	263	37	33
N38H	<=120	1.30	1.23	13.0	12.3	>=915	>=11.5	>=1,353	>=17	318	286	40	36
N41H	<=120	1.32	1.26	13.2	12.6	>=939	>=11.8	>=1,273	>=16	334	302	42	38
N44H	<=120	1.37	1.30	13.7	13.0	>=963	>=12.1	>=1,273	>=16	358	326	45	41
N27SH	<=150	1.11	1.02	11.1	10.2	>=780	>=9.8	>=1,592	>=20	231	199	29	25
N30SH	<=150	1.17	1.09	11.7	10.9	>=812	>=10.2	>=1,592	>=20	255	223	32	28
N33SH	<=150	1.22	1.14	12.2	11.4	>=851	>=10.7	>=1,592	>=20	279	247	35	31
N35SH	<=150	1.25	1.18	12.5	11.8	>=875	>=11.0	>=1,592	>=20	294	263	37	33
N39SH	<=150	1.30	1.23	13.0	12.3	>=923	>=11.6	>=1,592	>=20	318	286	40	36
N42SH	<=150	1.34	1.28	13.4	12.8	>=955	>=12.0	>=1,512	>=19	342	310	43	39
N25UH	<=180	1.07	0.98	10.7	9.8	>=732	>=9.2	>=1,989	>=25	215	183	27	23
N28UH	<=180	1.13	1.04	11.3	10.4	>=780	>=9.8	>=1,989	>=25	239	207	30	26
N30UH	<=180	1.17	1.09	11.7	10.9	>=812	>=10.2	>=1,989	>=25	255	223	32	28
N33UH	<=180	1.22	1.14	12.2	11.4	>=851	>=10.7	>=1,989	>=25	279	247	35	31
N35UH	<=180	1.25	1.18	12.5	11.8	>=875	>=11.0	>=1,989	>=25	294	263	37	33
N25EH	<=200	1.07	0.98	10.7	9.8	>=732	>=9.2	>=2,387	>=30	215	183	27	23
N28EH	<=200	1.13	1.05	11.3	10.5	>=780	>=9.8	>=2,387	>=30	239	207	30	26
N30EH	<=200	1.17	1.09	11.7	10.9	>=812	>=10.2	>=2,387	>=30	255	223	32	28

Samarium Cobalt Magnets

- Sintered (powder metallurgical) production process
- Chemical composition: $SmCo_5$ /
 Sm_2Co_{17}
- Extremely hard & brittle
- Very high resistance to demagnetisation
- Excellent resistance to corrosion
- Outstanding temperature stability
- Limited raw material supply limits use to specialised applications



Typical Magnetic Properties

Material	Grade	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
		Br(mT)	Br(kGs)	bHc(kA/m)	bHc(kOe)	iHc(kA/m)	iHc(kOe)	(BH)max(KJ/m ³)	(BH)max(MGOe)
SmCo ₅	S16	750-800	7.5-8.0	557-637	7.0-8.0	>=1,989	>=25	111-143	14-18
	S18	800-930	8.0-9.3	597-677	7.5-8.5	>=1,432	>=18	127-159	16-20
	S20	850-980	8.5-9.8	597-677	7.5-8.5	>=1,273	>=16	143-175	18-22
Sm ₂ Co ₁₇	S180	900-1,030	9.0-10.3	597-677	7.5-8.5	>=1,194	>=15	127-159	16-20
	S22A	900-1,030	9.0-10.3	613-693	7.7-8.7	>=1,989	>=25	159-191	20-24
	S22B	900-1,030	9.0-10.3	613-693	7.7-8.7	>=1,432	>=18	159-191	20-24
	S240	980-1,080	9.0-10.8	636-716	8.0-9.0	>=1,432	>=18	175-207	22-26
	S26A	1,000-1,130	10.0-11.3	676-756	8.5-9.5	>=1,194	>=15	191-223	24-28
	S26B	1,000-1,130	10.0-11.3	676-756	8.5-9.5	>=796	>=10	191-223	24-28
	S280	1,030-1,130	10.3-11.3	716-796	9.0-10.0	>=1,432	>=18	207-239	26-30
	S270	1,000-1,100	10.0-11.0	357-516	4.5-6.5	>=413	>=5.2	183-223	24-28
	S300	1,100-1,200	11.0-12.0	438-517	5.5-6.5	>=454	>=5.7	223-255	28-32

Alnico Magnets

- Sintered (powder metallurgical) or Cast production process
- Chemical composition: Al-Ni-Fe-Co
- Very hard & brittle
- Poor resistance to demagnetisation
- Good resistance to corrosion
- Excellent temperature stability
- Low performance magnet offering good cost to performance ratio in specific applications



Typical Magnetic Properties

Cast / Sintered	Grade	Remanence Br(Gs)	Coercivity bHc(Oe)	Intrinsic Coercivity iHc(Oe)	Max. Energy Product (BH)max(MGOe)
Alnico 5DG	13,300	670	670	6.5	
Alnico 5-7	13,500	740	740	7.5	
Alnico 6	10,500	780	800	3.9	
Alnico 8	8,200	1,650	1,860	5.3	
Sintered	Alnico 5	10,900	620	630	3.9
	Alnico 6	9,400	790	820	2.9
	Alnico 8	7,400	1,500	1,690	4.0