

**TABLE II-1  
TYPICAL MAGNETIC PROPERTIES AND  
CHEMICAL COMPOSITION OF ALNICO MATERIALS**

MMPA Brief Designation	Original MMPA Class	IEC Code Reference	Chemical Composition*					Magnetic Properties							
			Al	Ni	Co	Cu	Ti	Max. Energy Product (BH) <sub>max</sub> (MGOe)	(kJ/m <sup>3</sup> )	Residual Induction B <sub>r</sub> (gauss)	(mT)	Coercive Force H <sub>c</sub> (oersteds)	(kA/m)	Intrinsic Coercive Force H <sub>ci</sub> (oersteds)	(kA/m)
<b>ISOTROPIC CAST ALNICO</b>															
1.4/0.48	Alnico 1	R1-0-1	12	21	5	3	-	1.4	11.1	7200	720	470	37	480	38
1.7/0.58	Alnico 2	R1-0-4	10	19	13	3	-	1.7	13.5	7500	750	560	45	580	46
1.35/0.50	Alnico 3	R1-0-2	12	25	-	3	-	1.35	10.7	7000	700	480	38	500	40
<b>ANISOTROPIC CAST ALNICO</b>															
5.5/0.64	Alnico 5	R1-1-1	8	14	24	3	-	5.5	43.8	12800	1280	640	51	640	51
6.5/0.67	Alnico 5DG	R1-1-2	8	14	24	3	-	6.5	57.7	13300	1330	670	53	670	53
7.5/0.74	Alnico 5-7	R1-1-3	8	14	24	3	-	7.5	59.7	13500	1350	740	59	740	59
3.9/0.80	Alnico 6	R1-1-4	8	16	24	3	1	3.9	31.0	10500	1050	780	62	800	64
5.3/1.9	Alnico 8	R1-1-5	7	15	35	4	5	5.3	42.2	8200	820	1650	131	1860	148
5.0/2.2	Alnico 8HC	R1-1-7	8	14	38	3	8	5.0	39.8	7200	720	1900	151	2170	173
9.0/1.5	Alnico 9	R1-1-6	7	15	35	4	5	9.0	71.6	10600	1060	1500	119	1500	119
<b>ISOTROPIC SINTERED ALNICO</b>															
1.5/0.57	Alnico 2	R1-0-4	10	19	13	3	-	1.5	11.9	7100	710	550	44	570	45
<b>ANISOTROPIC SINTERED ALNICO</b>															
3.9/0.63	Alnico 5	R1-1-10	8	14	24	3	-	3.9	31.0	10900	1090	620	49	630	50
2.9/0.82	Alnico 6	R1-1-11	8	15	24	3	1	2.9	23.1	9400	940	790	63	820	65
4.0/1.7	Alnico 8	R1-1-12	7	15	35	4	5	4.0	31.8	7400	740	1500	119	1690	134
4.5/2.0	Alnico 8HC	R1-1-13	7	14	38	3	8	4.5	35.8	6700	670	1800	143	2020	161

Note: Balance iron for all alloys