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# Sintered AlNiCo permanent magnet material properties

Anisotropic and isotropic material  
grades

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## ISOTROPIC MATERIALS

### TYPICAL MAGNETIC PROPERTIES.

SGM Designation	IEC Designation	Remanence		Normal Coercivity		Intrinsic Coercivity		Maximum Energy Product	
		$B_r$ ( Gauss )	$B_r$ ( mT )	$H_{cB}$ ( Oe )	$H_{cB}$ ( kA/m )	$H_{cJ}$ ( Oe )	$H_{cJ}$ ( kA/m )	$(BH)_{max}$ ( MGOe )	$(BH)_{max}$ ( kJ/m <sup>3</sup> )
F	AINiCo 10/5	6700	670	585	45	615	50	1.40	11
HYNICO	AINiCo 16/9	6200	620	1100	90	1190	95	2.20	18

## ANISOTROPIC HIGH REMANENCE MATERIALS

### TYPICAL MAGNETIC PROPERTIES.

SGM Designation	IEC Designation	Remanence		Normal Coercivity		Intrinsic Coercivity		Maximum Energy Product	
		$B_r$ ( Gauss )	$B_r$ ( mT )	$H_{cB}$ ( Oe )	$H_{cB}$ ( kA/m )	$H_{cJ}$ ( Oe )	$H_{cJ}$ ( kA/m )	$(BH)_{max}$ ( MGOe )	$(BH)_{max}$ ( kJ/m <sup>3</sup> )
ATA	AINiCo 35/5	11800	1180	650	50	670	55	4.60	37
AF	AINiCo 30/6	11000	1100	720	55	755	60	4.00	32
AFA	AINiCo 26/6	10000	1000	750	60	800	65	3.40	27

## ANISOTROPIC HIGH COERCIVITY MATERIALS

### TYPICAL MAGNETIC PROPERTIES.

SGM Designation	IEC Designation	Remanence		Normal Coercivity		Intrinsic Coercivity		Maximum Energy Product	
		$B_r$ ( Gauss )	$B_r$ ( mT )	$H_{cB}$ ( Oe )	$H_{cB}$ ( kA/m )	$H_{cJ}$ ( Oe )	$H_{cJ}$ ( kA/m )	$(BH)_{max}$ ( MGOe )	$(BH)_{max}$ ( kJ/m <sup>3</sup> )
HC1	AINiCo 19/7	8100	810	845	65	900	70	2.50	20
HC3A	AINiCo 37/11	8700	870	1430	115	1485	120	4.90	39
HC3B	AINiCo 40/12	8650	865	1550	125	1615	130	5.50	44
HC3C	AINiCo 41/10	9800	980	1280	100	1320	105	5.40	43
HC4	AINiCo 37/15	7200	720	1840	145	1920	155	4.70	37
HC4A	AINiCo 41/13	8100	810	1700	135	1790	145	5.40	43