



HEAVY RARE EARTH (HRE) FREE NdFeB GRADES 2025

XX: Heavy Rare Earth Free Not Requiring a China Export License X: HRE Free Conditional

Grade	Heavy Rare Earth Free	Remanence Induction	Coercive Force	Intrinsic Coercive Force	Energy Product	Reversible Temperature Coefficients		Max Operating Temp.	Density
		Br	Hc	Hci	(BH)max	$\alpha$ Br	$\beta$ Hci	Tw	d
		kGs	kOe	kOe	MGOe	%/°C	%/°C	°C	g/cm <sup>3</sup>
N53	X	14.7 - 15.0	≥10.5	≥12	52-54	-0.12	-0.65	80	≥7.5
N52	X	14.5 - 14.8	≥10.5	≥12	50-52	-0.12	-0.65	80	≥7.5
N50	X	14.1 - 14.5	≥10.5	≥12	48-50	-0.12	-0.65	80	≥7.5
N48	XX	13.7 - 14.1	≥10.5	≥12	45-48	-0.12	-0.65	80	≥7.5
N45	XX	13.3 - 13.7	≥10.5	≥12	42-45	-0.12	-0.65	80	≥7.5
N42	XX	12.9 - 13.3	≥10.5	≥12	40-42	-0.12	-0.65	80	≥7.5
N40	XX	12.6 - 12.9	≥10.8	≥12	38-40	-0.12	-0.65	80	≥7.5
N38	XX	12.2 - 12.6	≥10.8	≥12	35-38	-0.12	-0.65	80	≥7.5
N35	XX	11.7 - 12.2	≥10.8	≥12	33-35	-0.12	-0.65	80	≥7.4
N33	XX	11.4 - 11.7	≥10.8	≥12	30-33	-0.12	-0.65	80	≥7.4
N30	XX	10.8 - 11.4	≥10.8	≥12	28-30	-0.12	-0.65	80	≥7.4
N52M	X	14.5 - 14.8	≥12.8	≥14	50-52	-0.12	-0.65	100	≥7.5
N50M	X	14.1 - 14.5	≥12.7	≥14	48-50	-0.12	-0.65	100	≥7.5
N48M	XX	13.7 - 14.1	≥12.5	≥14	45-48	-0.12	-0.65	100	≥7.5
N45M	XX	13.3 - 13.7	≥12.2	≥14	42-45	-0.12	-0.65	100	≥7.5
N42M	XX	12.9 - 13.3	≥10.5	≥12	40-42	-0.12	-0.65	100	≥7.5
N40M	XX	12.6 - 12.9	≥11.8	≥14	38-40	-0.12	-0.65	100	≥7.5
N38M	XX	12.2 - 12.6	≥11.5	≥14	35-38	-0.12	-0.65	100	≥7.5
N35M	XX	11.7 - 12.2	≥11.0	≥14	33-35	-0.12	-0.65	100	≥7.4
N33M	XX	11.4 - 11.7	≥10.5	≥14	30-33	-0.12	-0.65	100	≥7.4
N30M	XX	10.8 - 11.4	≥10.0	≥14	28-30	-0.12	-0.65	100	≥7.4
N52H	X	14.5 - 14.8	≥13.5	≥17	50-52	-0.11	-0.62	120	≥7.5
N50H	X	14.1 - 14.5	≥13.0	≥17	48-50	-0.11	-0.62	120	≥7.5
N48H	X	13.7 - 14.1	≥12.7	≥17	45-48	-0.11	-0.62	120	≥7.5
N45H	XX	13.3 - 13.7	≥12.2	≥17	42-45	-0.11	-0.62	120	≥7.5
N42H	XX	12.9 - 13.3	≥12.0	≥17	40-42	-0.11	-0.62	120	≥7.5
N40H	XX	12.6 - 12.9	≥11.8	≥17	38-40	-0.11	-0.62	120	≥7.5
H38H	XX	12.2 - 12.6	≥11.5	≥17	35-38	-0.11	-0.62	120	≥7.5
N35H	XX	11.7 - 12.2	≥11.0	≥17	33-35	-0.11	-0.62	120	≥7.5
N33H	XX	11.4 - 11.7	≥10.5	≥17	30-33	-0.11	-0.62	120	≥7.5
N30H	XX	10.8 - 11.4	≥10.0	≥17	28-30	-0.11	-0.62	120	≥7.5
N52SH		14.5 - 14.8	≥13.5	≥20	50-52	-0.11	-0.60	150	≥7.5
N50SH		14.1 - 14.5	≥13.0	≥20	48-50	-0.01	-0.60	150	≥7.5
N48SH		13.7 - 14.1	≥12.7	≥20	46-48	-0.11	-0.60	150	≥7.5
N46SH		13.5 - 13.7	≥12.5	≥20	44-46	-0.11	-0.60	150	≥7.5
N44SH	X	13.2 - 13.5	≥12.3	≥20	42-44	-0.11	-0.60	150	≥7.5
N42SH	X	12.9 - 13.2	≥12.1	≥20	40-42	-0.11	-0.60	150	≥7.5



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		Br	Hc	Hci	(BH)max	$\alpha$ Br	$\beta$ Hci	Tw	d
		kGs	kOe	kOe	MGOe	%/°C	%/°C	°C	g/cm <sup>3</sup>
N40SH	XX	12.6 - 12.9	≥11.7	≥20	38-40	-0.11	-0.60	150	≥7.5
N38SH	XX	12.2 - 12.6	≥11.3	≥20	36-38	-0.11	-0.60	150	≥7.5
N35SH	XX	11.7 - 12.2	≥11.0	≥20	33-36	-0.11	-0.60	150	≥7.5
N33SH	XX	11.4 - 11.7	≥10.7	≥20	31-33	-0.11	-0.60	150	≥7.5
N30SH	XX	10.8 - 11.4	≥10.2	≥20	28-31	-0.11	-0.60	150	≥7.5
N52UH		14.5 - 14.8	≥13.5	≥25	50-52	-0.10	-0.55	180	≥7.5
N50UH		14.1 - 14.5	≥13.0	≥25	48-50	-0.10	-0.55	180	≥7.5
N48UH		13.7 - 14.1	≥12.7	≥25	46-48	-0.10	-0.55	180	≥7.5
N46UH		13.5 - 13.7	≥12.5	≥25	44-46	-0.10	-0.55	180	≥7.5
N44UH		13.3 - 13.5	≥12.3	≥25	42-44	-0.10	-0.55	180	≥7.5
N42UH		12.9 - 13.3	≥12.2	≥25	40-42	-0.10	-0.55	180	≥7.5
N40UH		12.6 - 12.9	≥12.0	≥25	38-40	-0.10	-0.55	180	≥7.5
N38UH		12.2 - 12.6	≥11.6	≥25	35-38	-0.10	-0.55	180	≥7.5
N35UH		11.4 - 12.2	≥11.2	≥25	33-35	-0.10	-0.55	180	≥7.5
N33UH		11.4 - 11.7	≥10.8	≥25	30-33	-0.10	-0.55	180	≥7.5
N30UH		10.8 - 11.4	≥10.2	≥25	28-30	-0.10	-0.55	180	≥7.5
N48EH		13.7 - 14.1	≥13.0	≥30	46-48	-0.095	-0.50	200	≥7.5
N46EH		13.5 - 13.7	≥12.5	≥30	44-46	-0.095	-0.50	200	≥7.5
N44EH		13.3 - 13.5	≥12.3	≥30	42-44	-0.095	-0.50	200	≥7.5
N42EH		12.9 - 13.3	≥12.2	≥30	40-42	-0.10	-0.50	200	≥7.5
N40EH		12.6 - 12.9	≥11.8	≥30	38-40	-0.10	-0.50	200	≥7.5
N38EH		12.2 - 12.9	≥11.4	≥30	36-40	-0.09	-0.50	200	≥7.5
N35EH		11.7 - 12.5	≥11.0	≥30	33-37	-0.09	-0.50	200	≥7.5
N33EH		11.4 - 11.7	≥10.7	≥30	31-33	-0.09	-0.50	200	≥7.5
N30EH		10.8 - 11.4	≥10.2	≥30	28-31	-0.09	-0.50	200	≥7.5
N38AH		12.2 - 12.6	≥11.6	≥35	35-38	-0.09	-0.45	220	≥7.5
N35AH		11.7 - 12.2	≥11.1	≥35	32-35	-0.09	-0.45	220	≥7.5
N32AH		11.3 - 11.7	≥10.7	≥35	30-32	-0.09	-0.45	230	≥7.5

On April 4, 2025, the government of the People's Republic of China implemented a mandatory policy requiring an approved license for the export of rare earth minerals and magnets to all global destinations. Exempt from this restriction are NdFeB (Neo or Rare Earth) magnets that do not contain any restricted heavy rare earth minerals, such as Dy, Gd, or Tb. For NdFeB magnets, they must be fully manufactured, and shipping arrangements finalized, before an application for the export license can be submitted to the Ministry. As of April 28, 2025, the minimum waiting period for export license approval is 45 days. For further information, please contact Dan Vukovich or Patrick Morley at 219-548-3799, or email them at dan@allianceorg.com or pat@allianceorg.com.