

Baosteel's grain oriented (GO) silicon steel has excellent and stable electromagnetic properties and outstanding mechanical properties for which it can be slit, cut and laminated.

Baosteel's leading equipment and manufacture technology ensure the good shape, smooth surface, uniform thickness, small intra-plate deviation and high lamination factor. Baosteel GO silicon steel has uniform surface coating with good adhesiveness, which can prevent peeling of coating during processing.

Types of GO silicon steel:

G – common type

P – high induction type

R – domain refined high induction type

Electromagnetic property standard

Type	Grade	Thickness (mm)	Density (Kg/dm ³)	P17/50 Max. Core Loss (W/kg)	B8 Min. Induction (T)
Common type	B23G110	0.23	7.65	1.10	1.80
	B23G120			1.20	1.80
	B27G120	0.27	7.65	1.20	1.80
	B27G130			1.30	1.80
	B30G120	0.30	7.65	1.20	1.80
	B30G130			1.30	1.80
	B30G140			1.40	1.80
	B35G135			1.35	1.80
	B35G145	0.35	7.65	1.45	1.80
	B35G155			1.55	1.80
High induction type	B23P090	0.23	7.65	0.90	1.87
	B23P095			0.95	1.87
	B23P100			1.00	1.87
	B27P095	0.27	7.65	0.95	1.88
	B27P100			1.00	1.88
	B27P110			1.10	1.88
	B30P100	0.30	7.65	1.00	1.88
	B30P105			1.05	1.88
	B30P110			1.10	1.88
	B30P120			1.20	1.88
	B35P115	0.35	7.65	1.15	1.88
	B35P125			1.25	1.88
	B35P135			1.35	1.88
Domain refined high induction type	B23R080	0.23	7.65	0.80	1.87
	B23R085			0.85	1.87
	B23R090			0.90	1.87
	B27R090	0.27	7.65	0.90	1.87
	B27R095			0.95	1.87

Typical mechanical property

Type	Thickness (mm)	Yield strength (N/mm ²) min	Tensile strength (N/mm ²) min	Elongation (%) min	Hardness (Hv1)	Number of bends	Lamination factor (%)
Common Type	0.27	305	335	12	190	25	97
	0.30	310	345	12	190	20	98
High induction type	0.27	325	350	12	195	20	97
	0.30	310	350	11	195	17	98
Domain refined high induction type	0.23	326	353	12	195	19	96.5
	0.27	330	355	10	200	18	97

The surface of GO silicon steel product is coated with a layer of inorganic insulating coat, having the following features:

- High interlamination resistance – giving excellent interlaminar insulation.
- Excellent punching property – Close combination of coat and substrate gives rise to good adhesiveness, which can prevent peeling of coat during processing.
- High lamination factor – Surface coat is uniform and thin so that the lamination factor is good.
- Good heat resistance – The coat can withstand 800°C. annealing without damage.
- Good corrosion resistance – to cooling oil, insulating oil, mechanical oil, Freon and antifreezing oil.

Cross reference of Baosteel GO silicon steel designation

Series	Thickness mm	Baosteel	WISCO	JFE	TKS	AK	
Common type	0.23	B23G110	23Q110		C110-23		
		B23G120			C120-23	M-3	
	0.27	B27G120	27Q120	27JG120		C120-27	M-4
		B27G130	27Q130	27JG130		C130-27	M-4
	0.30	B30G120	30Q120	30JG120			
		B30G130	30Q130	30JG130		C130-30	
		B30G140	30Q140	30JG140		C140-30	M-5
	0.35	B35G145	35Q145	35JG145		C150-35	M-6
		B35G155	35Q155	35JG155		C165-35	M-6
	High induction type	0.23	B23P090	23QG090	23JGS090 23JGH090	H090-23	
			B23P095	23QG095	23JGS095 23JGH095	H095-23	
		0.27	B27P095	27QG095		H095-27	
B27P100			27QG100	27JGH100	H103-27		
0.30		B27P110	27QG110	27JGH110		H-1	
		B30P100	30QG100	30JGH100			
		B30P105	30QG105	30JGH105	H105-30		
		B30P110	30QG110	30JGH110	H111-30		
		B30P120	30QG120	35JGH120			
		B35P115		35JGS115 35JGH115			
0.35		B35P125		35JGS125 35JGH125			
		B35P135		35JGH135			
	B23R080		23JGSD80				
Domain refined high induction type	0.23	B23R085		23JGSD85	H085-23		
		B23R090		23JGSD90	H090-23	H-0DR	
	0.27	B27R090		27JGSD90	H090-27		
		B27R095		27JGSD95		H-1DR	

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