

POWER CORE INDUSTRIES™

(*) CRGO

DELIVERING YOUR DEMANDS

(*) CRGO

HISTORY:

The first Conventional Grain Oriented Steel grades known today as M3, M4 and M5 were developed in the 1960s and the Hi-B Grain Oriented Steel grades were developed in the early 1970s. Laser scribed material in the middle of 1980s were developed.

A.K. Steel America were the pioneers in development of CGOS grades and the Japanese mills Nippon Steel and Kawasaki Steel, the pioneers in development of HGO grades and laser scribed grades.

CRGO Grades and Iron Loss DATA

Grade	Thickness mm	Maximum Specific Iron Loss W/KG	
		1.5T	1.7T
M3	0.23	0.78	
M4	0.27	0.89	
M5	0.30	0.97	
M6	0.35	1.11	
Hi-B	0.23		1.00
	0.27		1.03
Hi-B DR/LS	0.23		0.85
	0.27		0.95

Important Physical Properties of CRGO	
Density gm/c3	7.65
Silicon content %	3.10
Resistivity micro Ohm-centimetre	48.00
Ultimate Tensile Strength 0° to Rolling Direction Kg/mm2	32.60
Ultimate Tensile Strength 90° to Rolling Direction Kg/mm2	38.20
Stacking factor % M4 (.27 mm)	96.00
Stacking factor % M5 (.30 mm)	96.50
Stacking factor % M6 (.35 mm)	97.00



Standard Loss Chart of Different Origin Grades:

Thickness mm (inch)	POSCO	JIS	ASTM	EN
	(2006) w/kg 17/50	JIS C 2553 (2000) w/kg 17/50	(1999) w/kg 17/60	EN10107 (1995) w/kg 17/50
0.23 (0.009)	23PHD085 0.85	23R085 0.85	23Q054 1.19	
	23PH090 0.90	23P090 0.90		
	23PH095 0.95	23P095 0.95		
	23PH100 1.00	23P100 1.00	23P060 1.32	M100-23P 1.00
0.27 (0.0106)	27PHD090 0.90	27R090 0.90		
	27PH095 0.95			
	27PH100 1.00	27P100 1.00		M103-27P 1.03
	27PG110 1.10	27P110 1.10	27P066 1.46	
	27PG120 1.20	27G120 1.20		M130-27S 1.30
	27PG130 1.30	27G130 1.30	27H074 1.63	
0.30 (0.0118)	30PH100 1.00			M105-30P 1.05
	30PH105 1.05	30P105 1.05		
	30PG110 1.10	30P110 1.10		M111-30P 1.11
	30PG120 1.20	30P120 1.20		M117-30P 1.17
	30PG130 1.30	30G130 1.30		
	30PG140 1.40	30G140 1.40	30H083 1.83	M140-30S 1.40
0.35 (0.0138)	35PH115 1.15	35P115 1.15		
	35PH125 1.25	35P125 1.25		
	35PH135 1.35	35P135 1.35		
	35PG145 1.45	35G145 1.45		
	35PG155 1.55	35G155 1.55	35H094 2.07	M150-35S 1.50