

# MAGNETIC SHIELD CORP.



## NETIC® S3-6 STRESS ANNEALED SHEET

### DESCRIPTION

Our proprietary NETIC® alloy has very high iron content. After proper annealing, NETIC® becomes essentially, pure iron, giving it excellent magnetic properties. Unlike our other soft-magnetic shielding alloys, NETIC has a high magnetic saturation, making it suitable against high intensity magnetic fields. It has improved resistance against corrosion and oxidation in comparison to ordinary steels. This alloy also has good cold forming capabilities and is suitable for welding.

TYPICAL CHEMICAL COMPOSITION (WEIGHT %)								
C	Mn	P	S	N	Cu	Co	Sn	Fe
.008	.060	.005	.030	.005	.030	.005	.005	Bal.

MAGNETIC PROPERTIES <sup>1</sup>	
Coercivity (Hc)	0.75-1.5 Oe [60-120 A/m]
Initial Permeability	300-500
Maximum Permeability (μmax)	3,500-6,000

PHYSICAL PROPERTIES*	
Saturation Induction (Bs)	21,500 G [2.15 T]
Density	.284 lb/in <sup>3</sup> [7.86 g/cm <sup>3</sup> ]
Electrical Resistivity	11 x 10 <sup>-6</sup> ohm meter
Linear Expansion Coefficient Temperature range (0-100°C)	12 x 10 <sup>-6</sup> / °C
Modulus of Elasticity	207/kNmm <sup>2</sup>
Melting Temperature	2797°F [1536°C]

MECHANICAL PROPERTIES* (typical values on as-rolled, un-annealed product)	
Brinell Hardness (HB)	90

<sup>1</sup> measured on final annealed ring samples.

\*Note: All product data given in this data sheet are typical values based on the experience of the melt source. They are not part of material specification and do not guarantee particular characteristics.