



CORPORATE OFFICE
1900 Hayes Avenue, Camden, NJ 08105, (856) 964-7842, Fax (856) 963-8569

WESTERN DIVISION
2475 W La Palma Avenue, Anaheim, CA 92801, (714) 828-4625, Fax (714) 828-4279

Email: info@magmet.com

WWW.MAGNETICMETALS.COM

Iron-Based Amorphous Alloy (9101)

Magnetic Metals Amorphous (material code: 9101) is composed of 80% Iron, balanced with Boron, Silicon, and Carbon. This alloy is essentially a high flux, square loop material with reasonably low core loss at high frequencies. It is perfect for a wide range of applications, including saturable reactors, DC inductors (chokes), and pulse transformers. This material is better performing and more economical as a substitute for 50% Nickel (1 and ½ mil) and 3% G.O.S.S (1 mil thick).

MAGNETIC PROPERTIES

B _m (kGauss)	B _r /B _m	H _c (A/m)	Resistivity (μΩ-cm)	Curie Temp (°C)	Density (gm/cm ³)	Thickness (inches)	S.F.
14.2 – 16.0	>.85	.02	130	395	7.2	.001	.75

NAMLITE® COATING is a MMC proprietary method used to reduce eddy currents at high frequency. As frequency increases, the isolation between laminations (material coating) becomes critical. For applications >50 kHz, Namlite coating is applied to 9001 material to reduce the eddy current losses of this already thin material.

Permeability

Flux Density	Frequency	With Namlite	Without Namlite
100 Gauss	10 kHz	10,000	15,000
100 Gauss	100 kHz	8,000	6,000

Core Loss

Flux Density	Frequency	With Namlite	Without Namlite
1000 Gauss	10 kHz	2 W/lb	1.5 W/lb
1000 Gauss	100 kHz	35 W/lb	50 W/lb

PART NUMBERS FOR 9101 CORES:

- **Toroidal core:** xxxx-P- 9101 (Plastic case is best to preserve electrical properties)

Magnetic Metals is processing 9101 amorphous material for square loop applications. For round loop, high permeability applications, customers should use Nanocrystalline material (9001).

- **Cut Core:** MMG-xxxx (single phase)
MTMG-xxxx (three-phase)

For cut cores, Magnetic Metals can process material for high frequency applications with Namlite coating.

Note: The soft magnetic properties on this datasheet were compiled from empirical data, using standard manufacturing procedures and are indicative of results from these standard processes.