



MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS
 INSULATING COMPONENTS FOR
 POWER SYSTEMS EQUIPMENT

The Gund Company, Inc
 MM&M Division
 TEL - 219.374.9944
 FAX - 219.374.9966

MATERIAL DATA SHEET

Item: **MAGNOHL™** Magnetic Wedge Material

Description: **MAGNOHL™** is a magnetic glass reinforced laminate that is utilized as a wedge material in high performance motors and generators. **MAGNOHL™** provides a flux path through the wedge allowing for better magnetic flux distribution to the stator core, thereby reducing losses and heat rise. **MAGNOHL™** has mechanical properties that typically meet or exceed those of non-magnetic wedge materials.

Availability:	Laminate Sheets:	Thickness:	English Units 0.062" – 0.4"	SI Units 1.6 mm – 10 mm
		Sheet Sizes:	37" x 73"	94 cm x 185 cm

Fabricated Parts: The Gund Company custom fabricates insulation materials to the exact specifications and drawings of our customers.

Key Characteristics:	Test Method	Units - English (SI)	Typical Values
Standard Color			Black
Density		Lbs/In ³ (g/cc)	.108 (3.2)
Compressive Strength, 23C	D-695, Flat	psi (MPa)	48,000
Flexural Strength, 23C	D-790	psi (MPa)	24,000 (167)
Flexural Strength, 150C	D-790	psi (MPa)	16,000 (110)
Shear Strength, 23C	D-732	psi (MPa)	19,000 (131)
Shear Strength, 150C	D-732	psi (MPa)	13,000 (90)
Bond Strength (1/2" thick)	D-229	Lbs. (kg)	1080 (490)
Shear Strength	D-732	psi (MPa)	12,500 (86)
Volume Resistivity	D-257	Ohms-cm	1(10 ⁵) – 1 (10 ⁶)
Magnetic Properties			See Attached
Thermal Class			Class F – 155C

All of the information, suggestions, and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the use contemplated, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty, expressed or implied, including, without limitation warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.

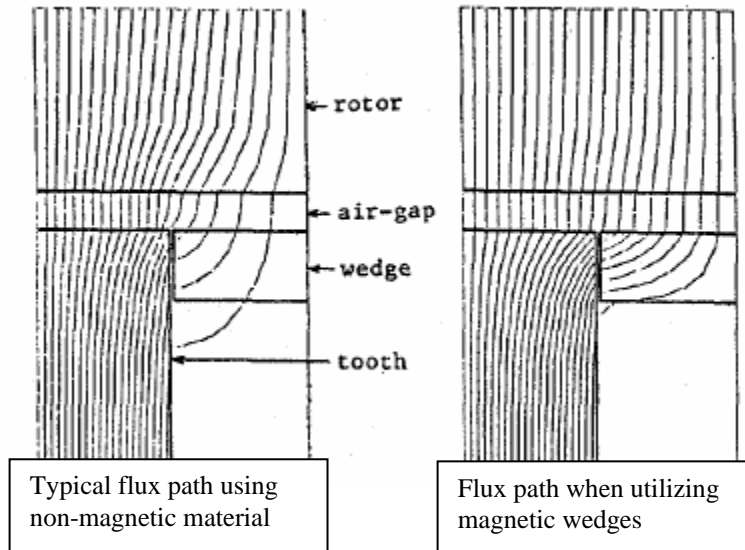


MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS
 INSULATING COMPONENTS FOR
 POWER SYSTEMS EQUIPMENT

The Gund Company, Inc.
 MM&M Division
 TEL - 219.374.9944
 FAX - 219.374.9966

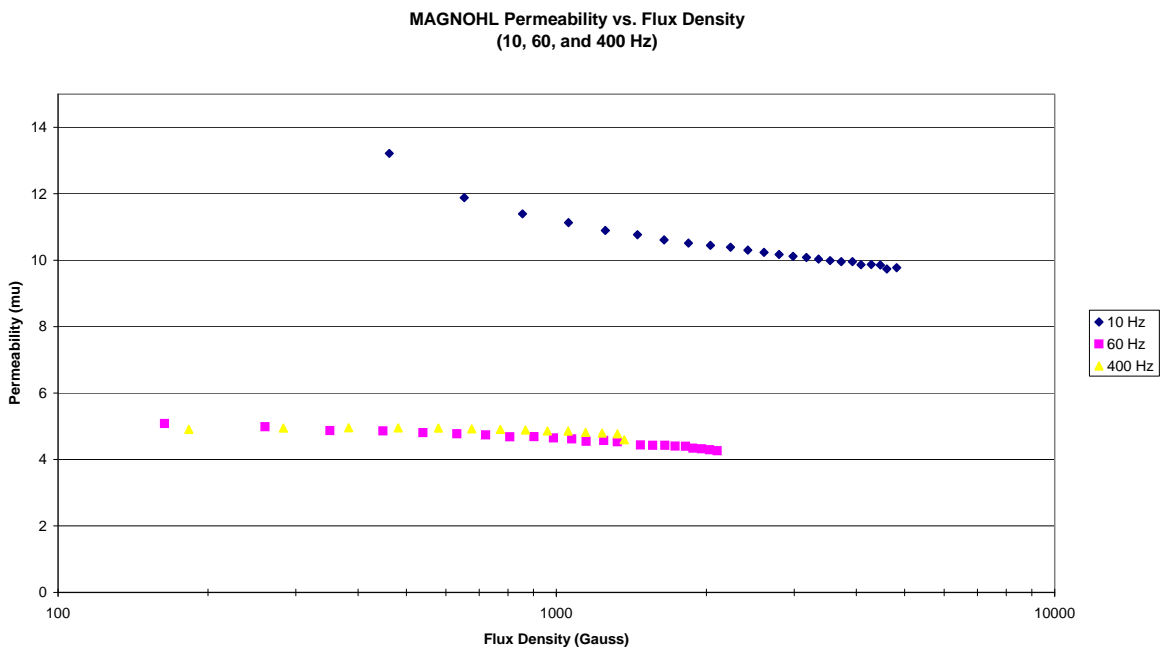
MAGNOHL™ MAGNETIC PROPERTIES

The following diagram provides a simple illustration of the difference in flux paths when using non-magnetic versus magnetic wedge materials.



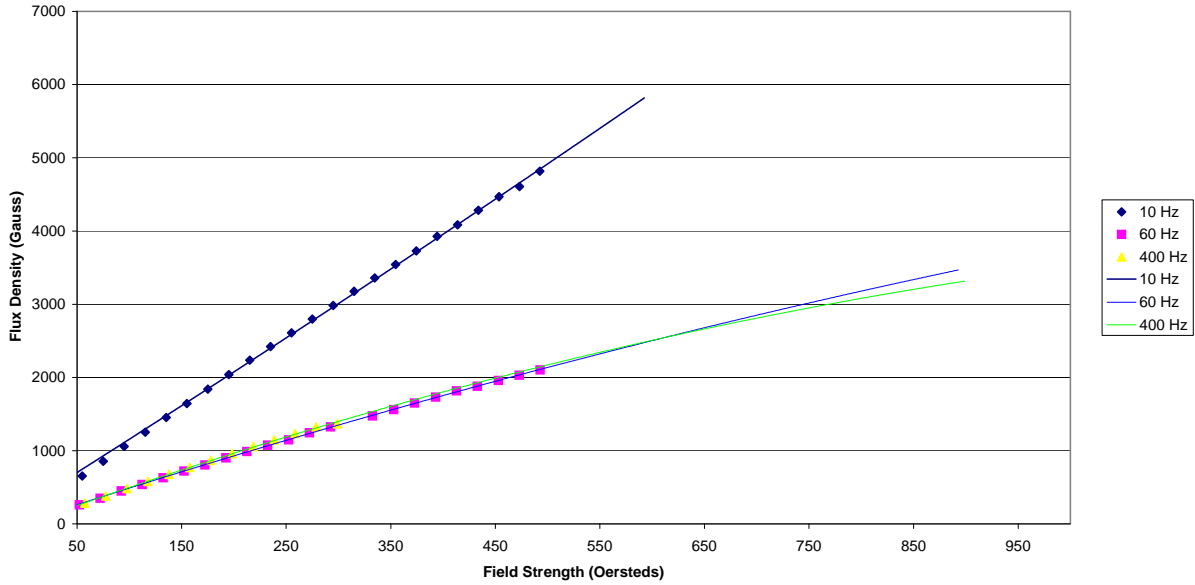
Magnetic Properties Tested According to ASTM A-927

ASTM A-927 utilizes toroidal specimens and flux paths are parallel to the laminations in the specimen.

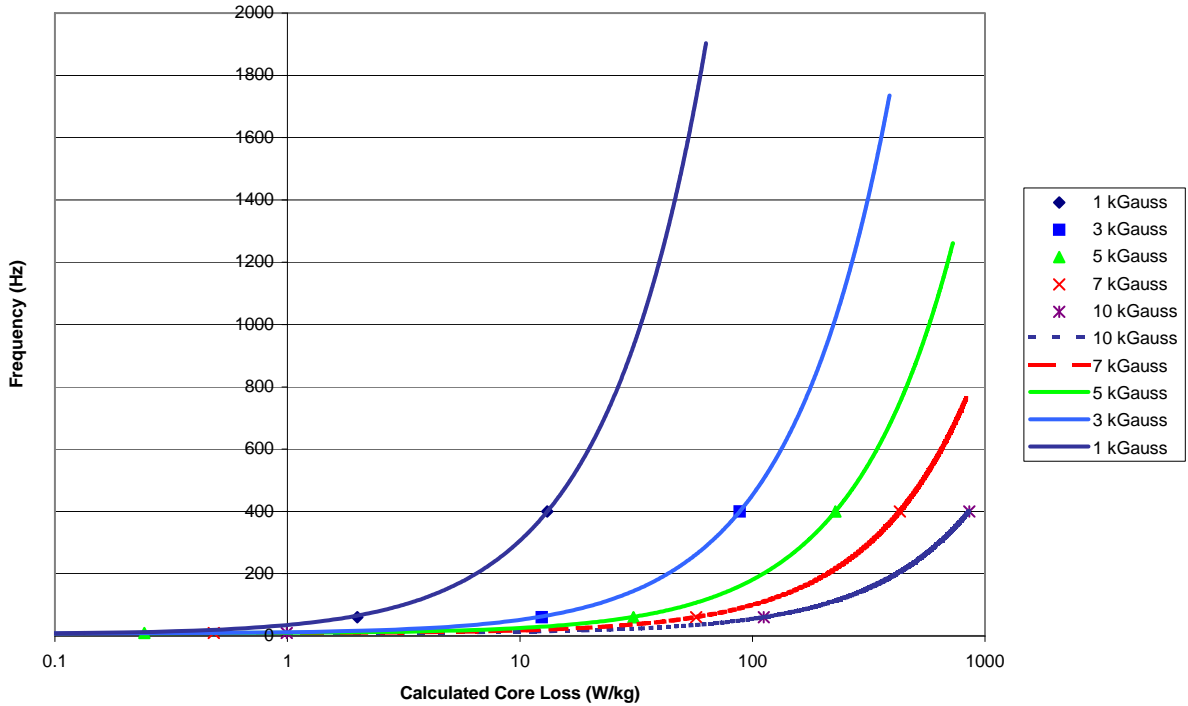


All of the information, suggestions, and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the use contemplated, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty, expressed or implied, including, without limitation warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.

**MAGNOHL B(H) Curves
(10, 60, and 400 Hz)**



MAGNOHL Frequency and Core Loss Relationship



All of the information, suggestions, and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the use contemplated, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty, expressed or implied, including, without limitation warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.