MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS
INSULATING COMPONENTS FOR
POWER SYSTEMS EQUIPMENT

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

			English Units	SI Units
Availability:	Laminate Sheets:	Thickness:	0.062" – 0.4"	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

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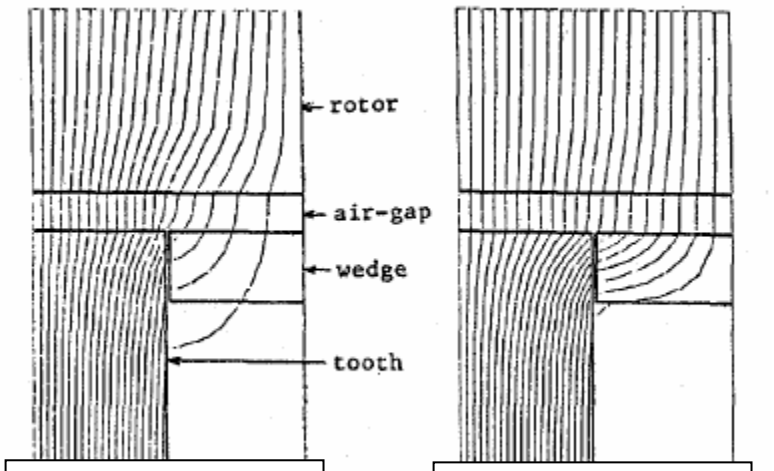
MAGNOHL™ MAGNETIC PROPERTIES

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

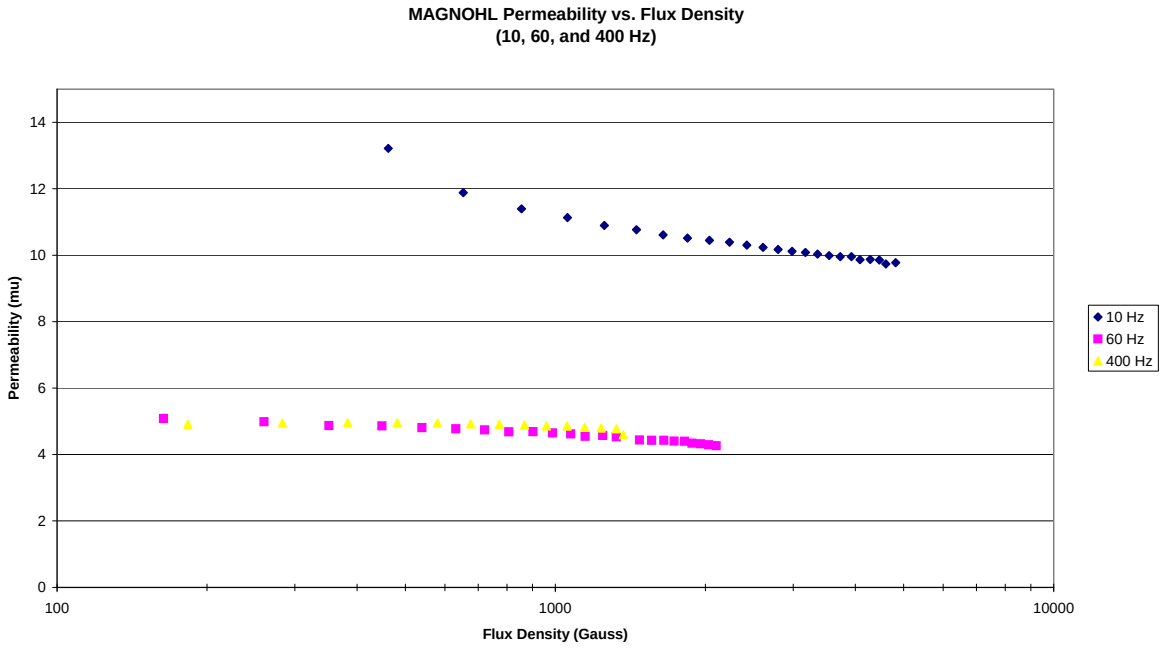


Typical flux path using non-magnetic material

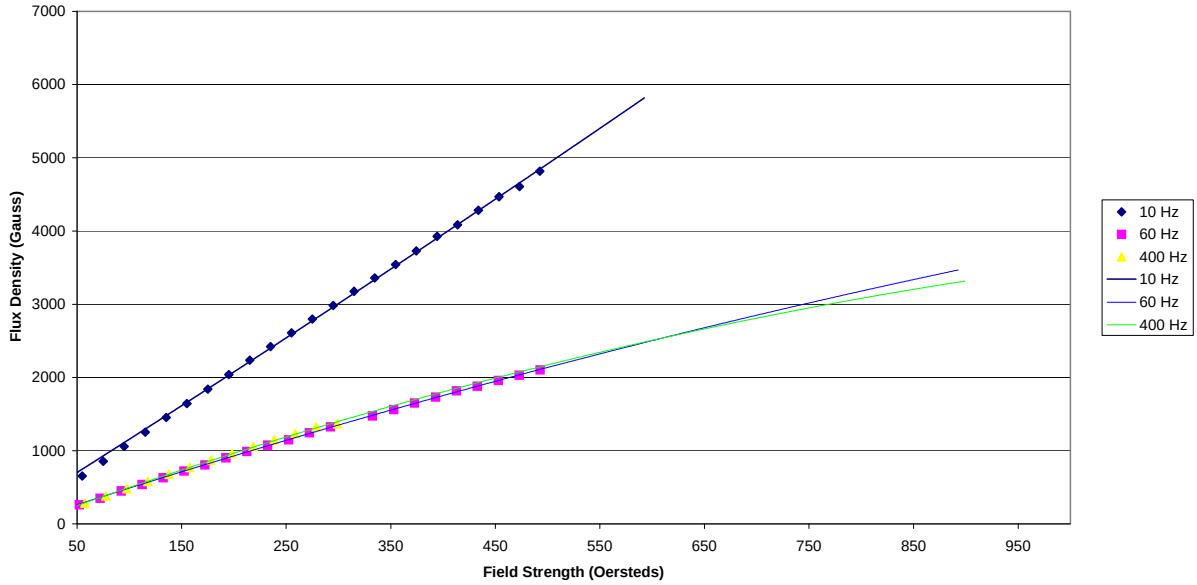
Flux path when utilizing magnetic wedges

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.



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



MAGNOHL Frequency and Core Loss Relationship