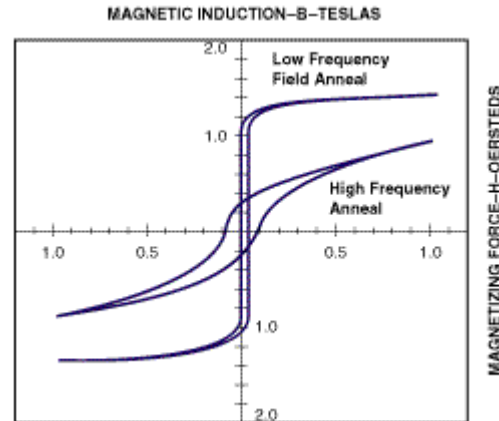


Applications

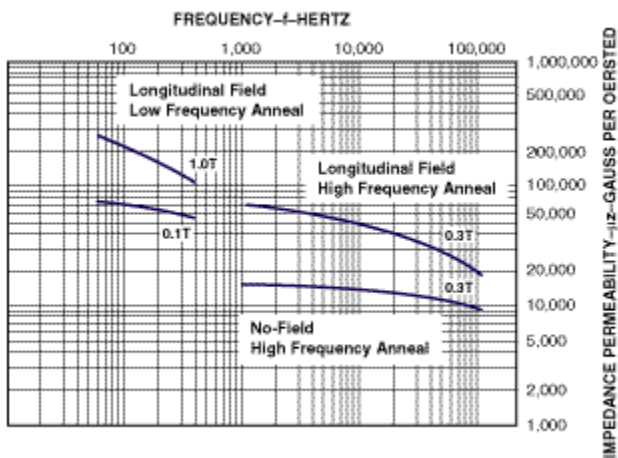
- Current transformers
- Ground fault protection devices
- High frequency cores

Benefits

- Low core loss at high frequencies (>1 kHz)
- High operating temperature with minimal flux density reduction
- Can be annealed for high permeability in low or high frequencies



Typical Impedance Permeability Curves, Various Field Anneal



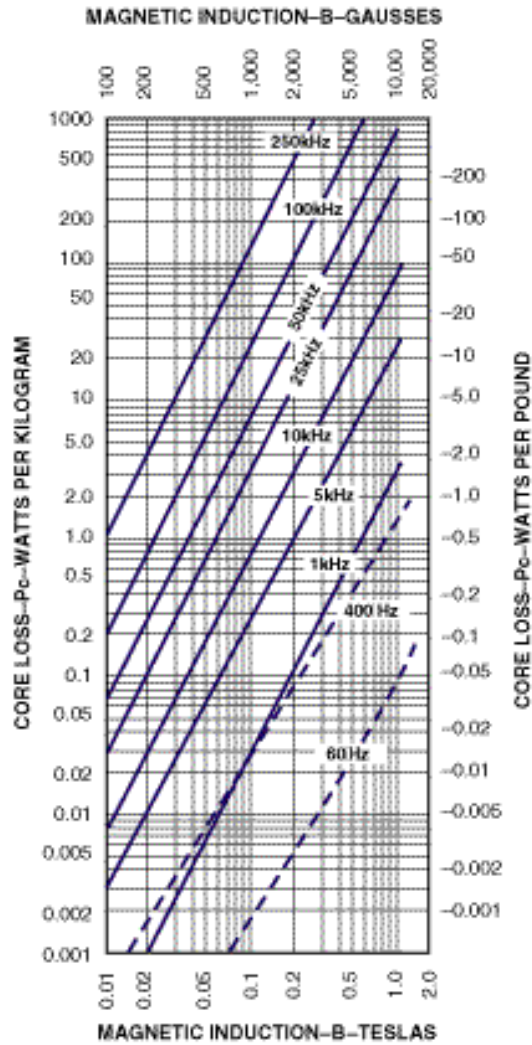
Physical Properties

Density (g/cm ³)	7.29
Vicker's Hardness (50g Load)	.860
Tensile Strength (GPa)	1-2
Elastic Modulus (GPa)	100-110
Lamination Factor (%)	>75
Thermal Expansion (ppm/°C)	6.7
Crystallization Temperature (°C)	535
Continuous Service Temp. (°C)	150

Magnetic Properties

Saturation Induction (T)	1.41
Maximum D.C. Permeability (μ):	
Annealed	35,000
As Cast	>20,000
Saturation Magnetostriction (ppm)	20
Electrical Resistivity (μ-cm)	138
Curie Temperature (°C)	358

**Typical Core Loss Curves, Longitudinal Field Anneal
METGLAS Alloy 2605S3A**



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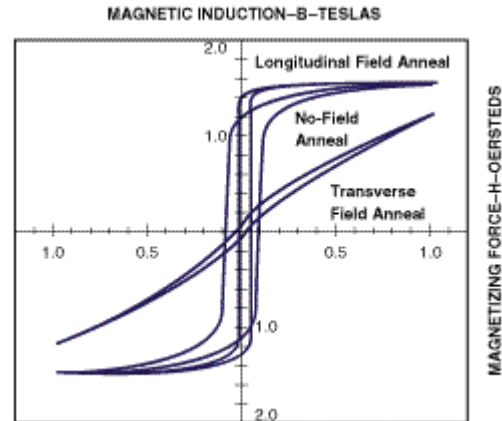
Fax: 49(0)211-16009-30

Applications

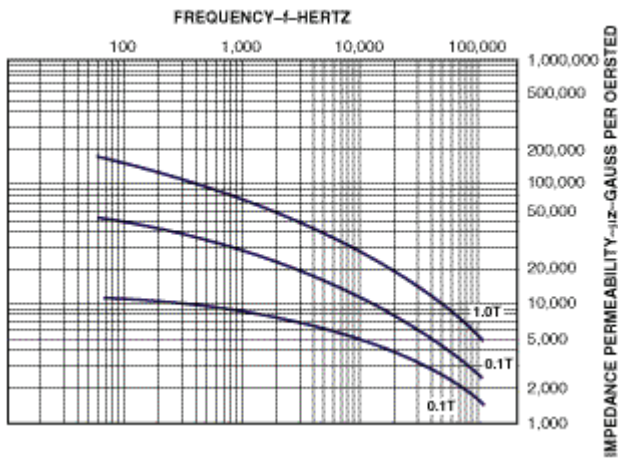
- Distribution and power transformers
- Motors
- High frequency inductors
- Current transformers
- Devices requiring high permeability and low loss at low frequencies

Benefits

- Extremely low core loss – less than 0.29 w/kg at 60 Hz, 1.35 Tesla, or 40% of the core loss of grade M3 electrical steel (core loss at 50 Hz is approximately 80% of 60 Hz values). This is for finished cores.
- High permeability



**Typical Impedance Permeability Curves,
Longitudinal Field Anneal**



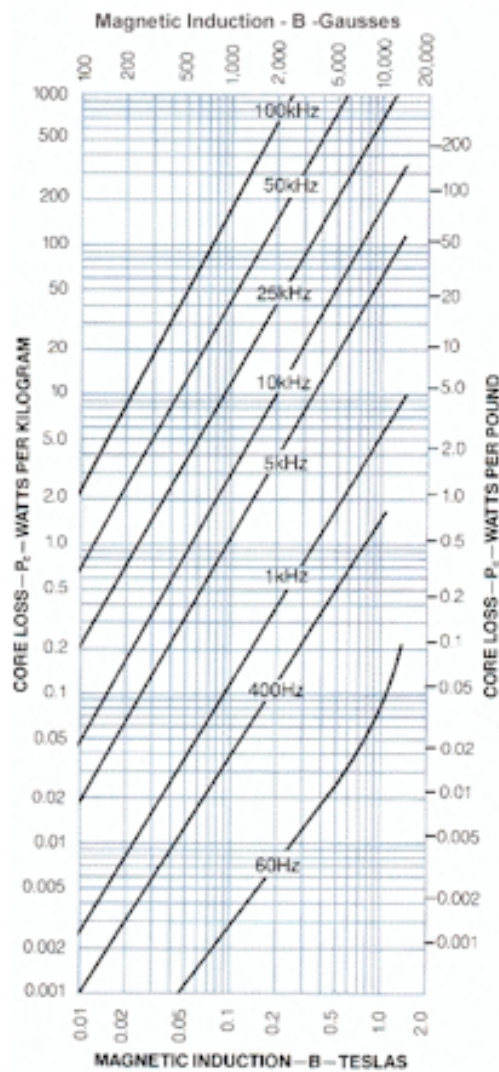
Physical Properties

Density (g/cm ³) As Cast	7.18
Vicker's Hardness (50g load)	900
Tensile Strength (GPa)	1-2
Elastic Modulus (GPa)	100-110
Lamination Factor (%)	>82
Thermal Expansion (ppm/°C)	7.6
Crystallization Temperature (°C)	508
Continuous Service Temp. (°C)	150

Magnetic Properties

Saturation Induction (T) As Cast	1.56
Maximum D.C. Permeability (μ):	
Annealed	600,000
As Cast	45,000
Saturation Magnetostriction (ppm)	27
Electrical Resistivity (μΩ.cm)	130
Curie Temperature (°C)	399

**Typical Core Loss Curves, Longitudinal Field Anneal
METGLAS Alloy 2605SA1**



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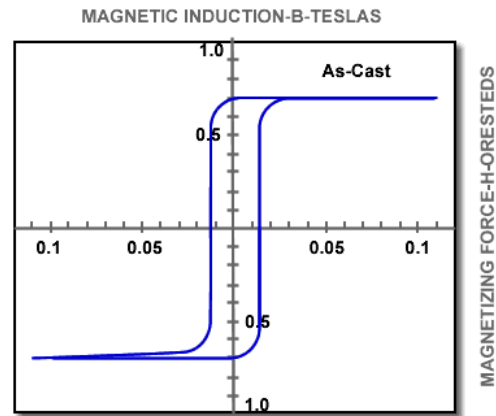
Applications

- Flexible electromagnetic shielding
- Magnetic sensors
- High frequency cores

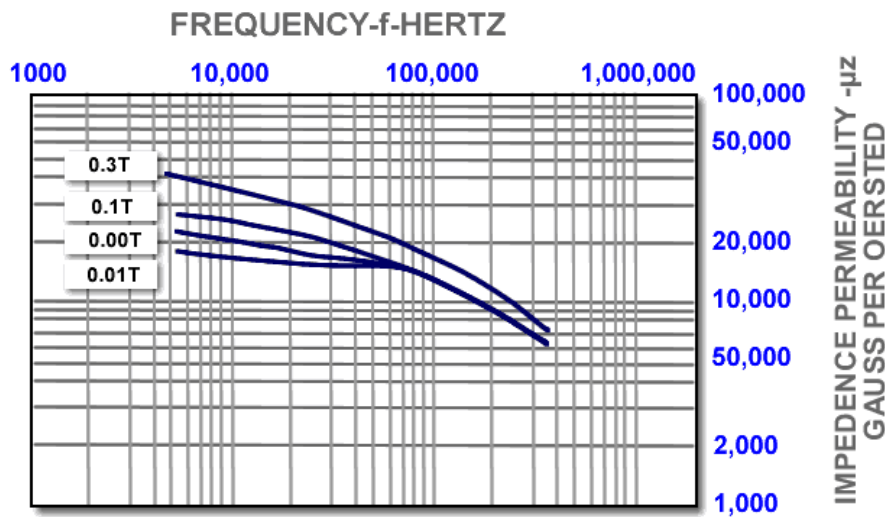
Benefits

- Near-zero magnetostriction
- High DC permeability at low fields without annealing
- High tensile strength

Typical DC Hysteresis Loop



**Typical Impedance Permeability Curves,
Longitudinal Field Anneal**



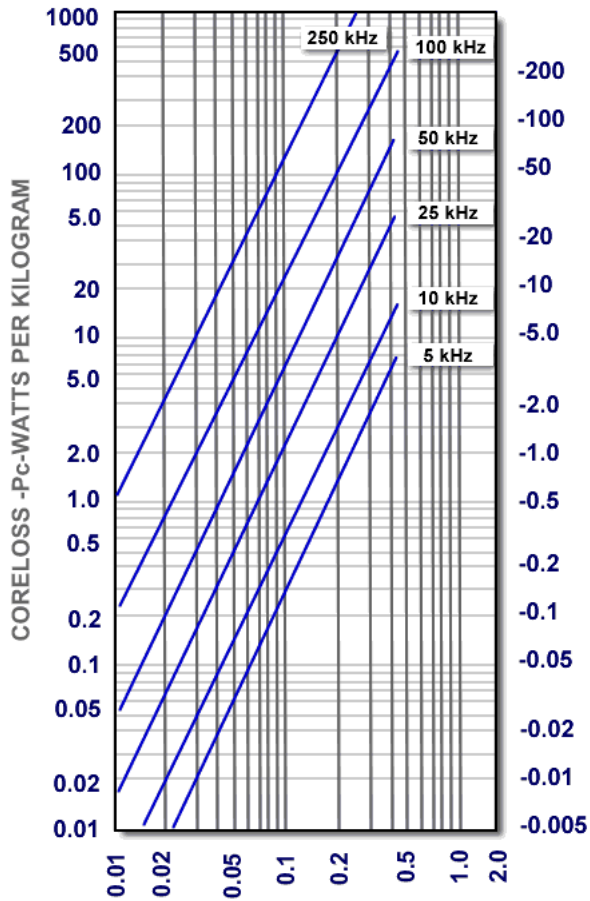
Physical Properties

Density (g/cm ³)	7.80
Vicker's Hardness (50g load) . . . . .	.900
Tensile Strength (GPa) . . . . .	.1-2
Elastic Modulus (GPa)	100-110
Lamination Factor (%)	>75
Thermal Expansion (ppm/°C) . . . . .	.12.1
Crystallization Temperature (°C) . . . . .	.520
Continuous Service Temp. (°C) . . . . .	.90

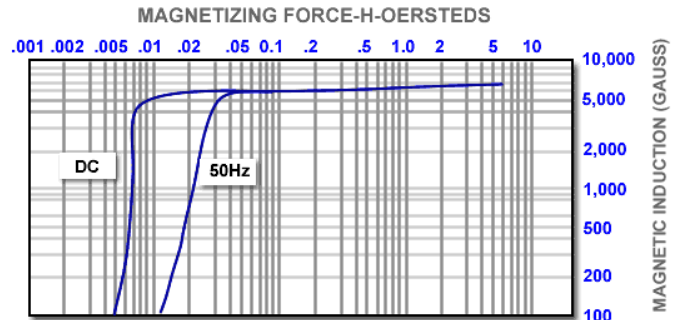
Magnetic Properties

Saturation Induction (T) . . . . .	.0.77
Maximum D.C. Permeability (μ):	
Annealed . . . . .	.600,000
As Cast	290,000
Saturation Magnetostriction (ppm)	<0.5
Electrical Resistivity (μΩ.cm) . . . . .	.136
Curie Temperature (°C) . . . . .	.365

**Typical Core Loss Curves
Metglas Alloy 2705M**



**Typical Initial Magnetization
Curves (as-cast)
Metglas Alloy 2705M**



Notes :

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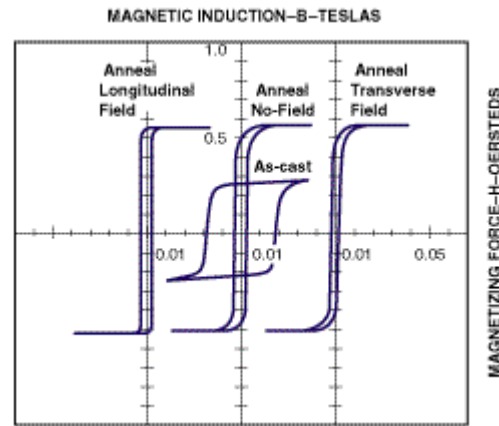
Applications

- Switch-mode power supply applications
- High frequency transformers
- High sensitivity matching transformers
- Ultra-sensitive current transformers
- Shielding
- Sensor applications

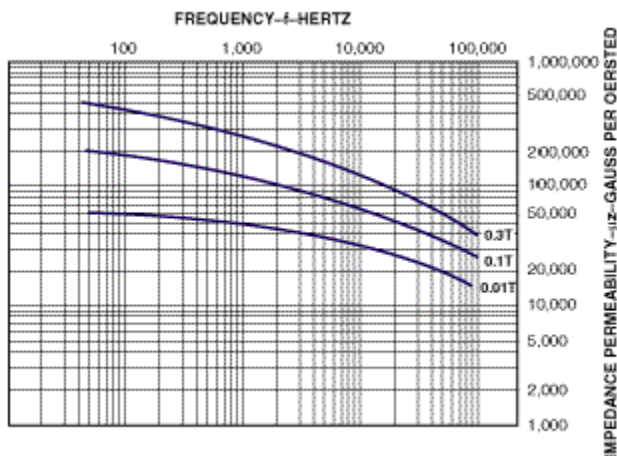
Benefits

- Extremely low core loss
- Ultra-high permeability
- High squareness ratio – low coercive force
- Near-zero magnetostriction
- Excellent corrosion resistance

Typical DC Hysteresis Loop



**Typical Impedance Permeability Curves,
No-Field Anneal**



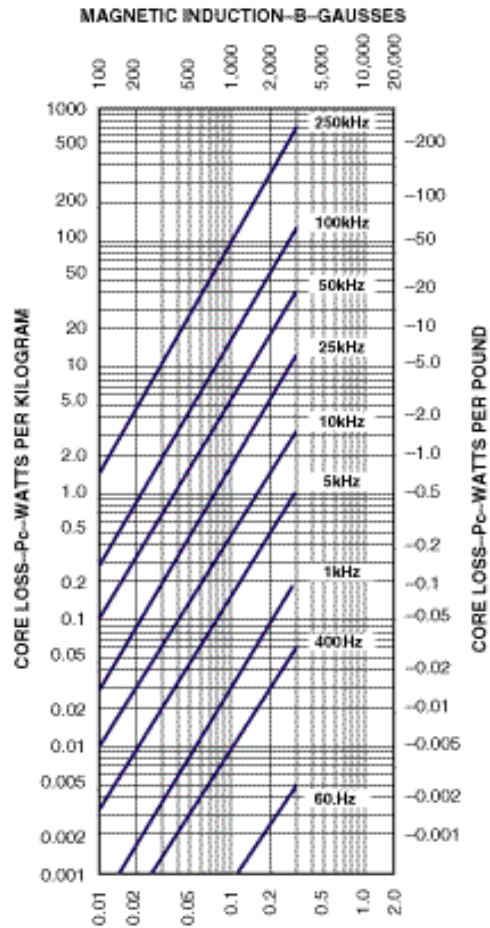
Physical Properties

Density (g/cm ³)	7.59
Vicker's Hardness (50g load) . . . . .	.960
Tensile Strength (GPa) . . . . .	.1-2
Elastic Modulus (GPa)	100-110
Lamination Factor (%)	>75
Thermal Expansion (ppm/°C)	12.7
Crystallization Temperature (°C) . . . . .	.550
Continuous Service Temp. (°C) . . . . .	.90

Magnetic Properties

Saturation Induction (T) . . . . .	.057
Maximum D.C. Permeability (μ):	
Annealed	1,000,000
As Cast	>80,000
Saturation Magnetostriction (ppm)	<0.5
Electrical Resistivity (μΩ.cm)142
Curie Temperature (°C)225

**Typical Core Loss Curves
Metglas Alloy 2714A**



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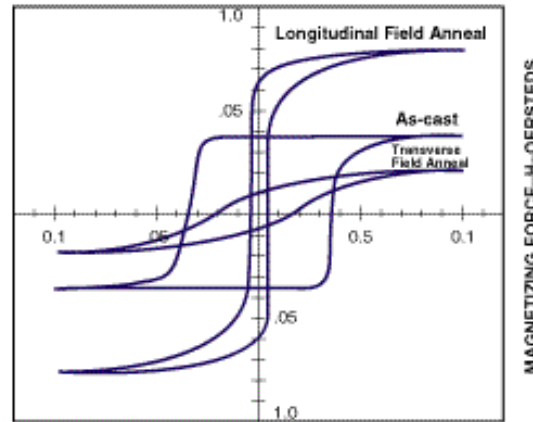
Applications

- Field sensors
- Shielding applications
- High frequency cores

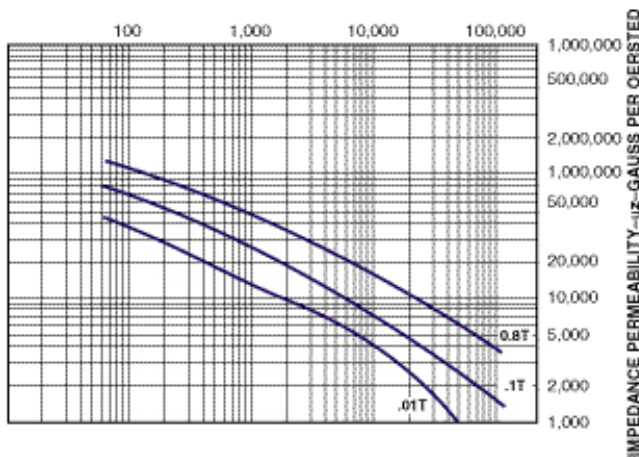
Benefits

- Medium saturation induction
- Lower magnetostriction
- Higher corrosion resistance
- Can be annealed for very high DC permeability, rounded or square B-H loops

Typical DC Hysteresis Loop



Typical Impedance Permeability Curves,
No-Field Anneal



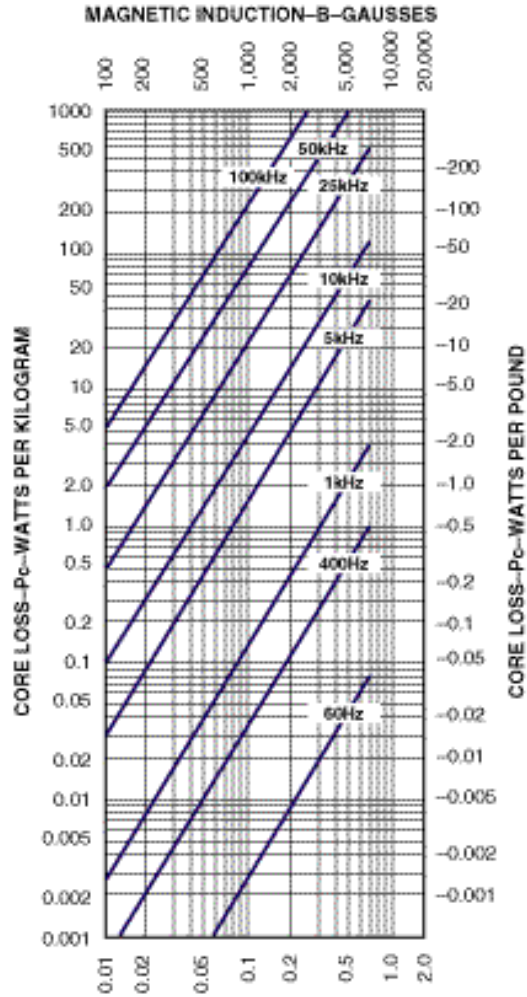
Physical Properties

Density (g/cm ³)	7.90
Vicker's Hardness (50g load)	740
Tensile Strength (GPa)	1-2
Elastic Modulus (GPa)	100-110
Lamination Factor (%)	>75
Thermal Expansion (ppm/°C)	11.7
Crystallization Temperature (°C)	410
Continuous Service Temp. (°C)	125

Magnetic Properties

Saturation Induction (T)	0.88
Maximum D.C. Permeability (μ):	
Annealed	800,000
As Cast	>50,000
Saturation Magnetostriction (ppm)	12
Electrical Resistivity (μΩ.cm)	138
Curie Temperature (°C)	353

**Typical Core Loss Curves, Longitudinal Field Anneal
METGLAS Alloy 2826MB**





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