



# AncorLam™

**AncorLam™** is a high performance insulated particle material suitable for a variety of soft magnetic applications that require low core losses. Specific applications include ignition system components, electric motor components, solenoids, and inductors.

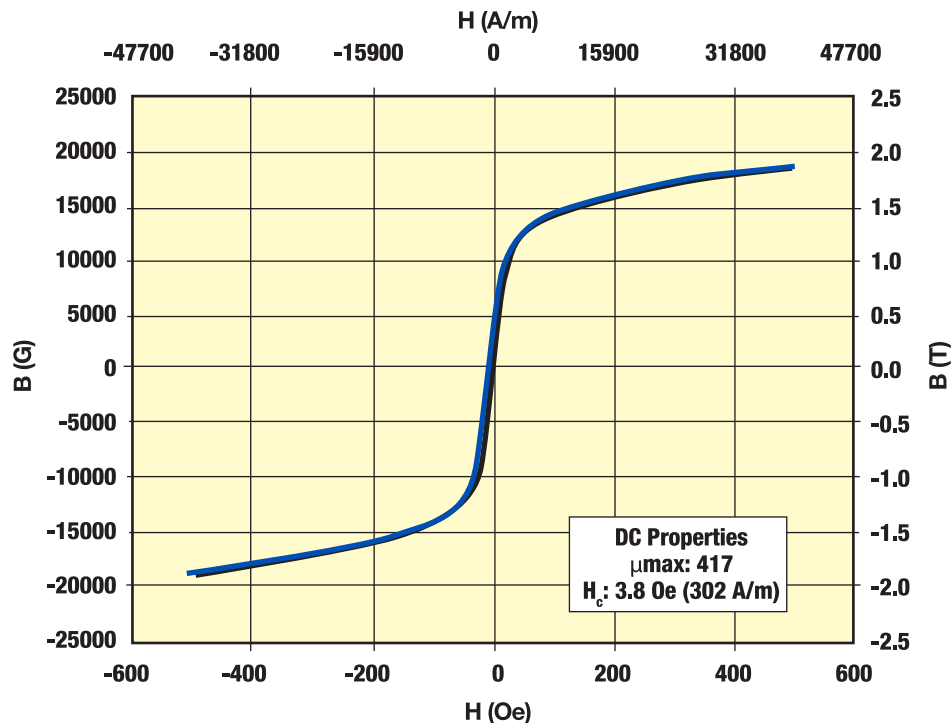
AncorLam™ consists of high purity iron powder with a specialized coating/lubricant system that minimizes hysteresis and eddy current losses over a range of frequencies. This material is provided as a press ready premix for warm die compaction.

Performance of AncorLam™ at 7.45 g/cm<sup>3</sup> at a field strength of 6.4 kA/m (80 Oe) are:

- High Cured Strength: 69-81 MPa (10,000-11,700 psi)
- Induction: 1.4 T (14,000 G)
- Saturation Induction: 1.9 T (19,000 G)
- Maximum Permeability Approaching 500
- Resistivity: 8,000 μ-ohm-cm
- AncorLam™ has a maximum operating temperature of 200°C (400°F)

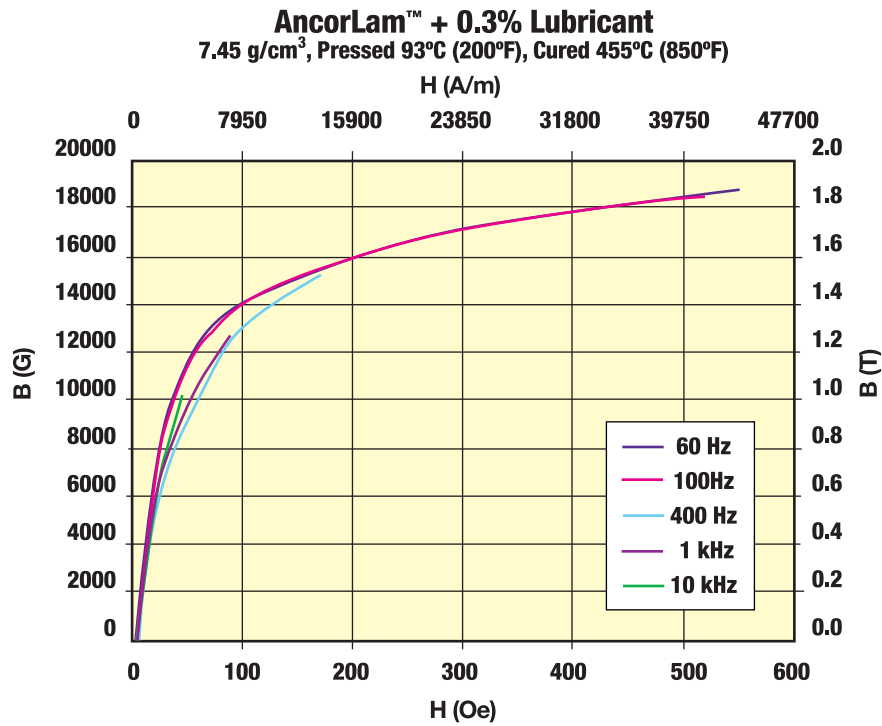
## DC Hysteresis

**AncorLam™ + 0.3% Lubricant**  
7.45 g/cm<sup>3</sup>, Pressed 93°C (200°F), Cured 455°C (850°F)

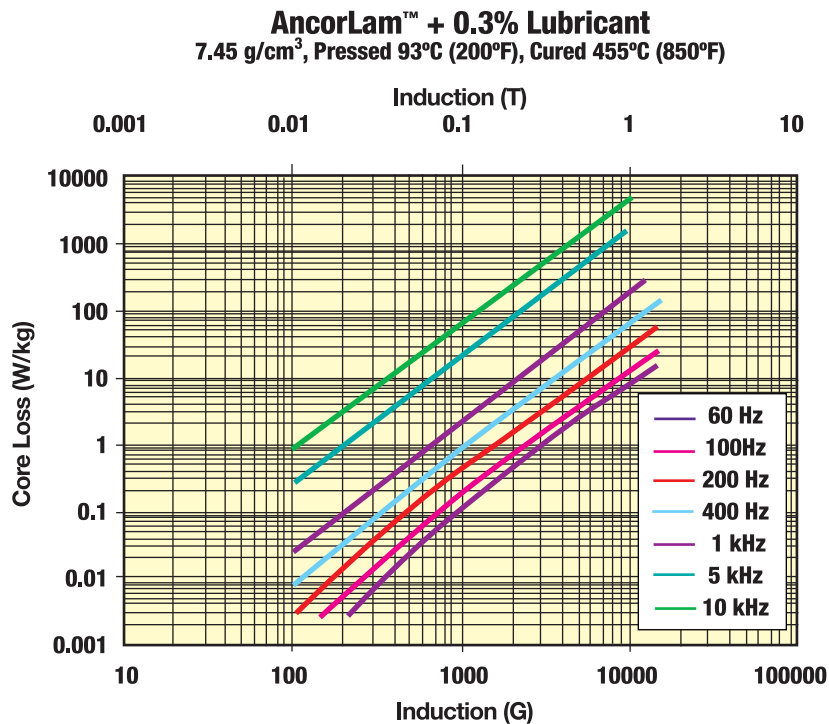


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## Typical B-H Curves, AC



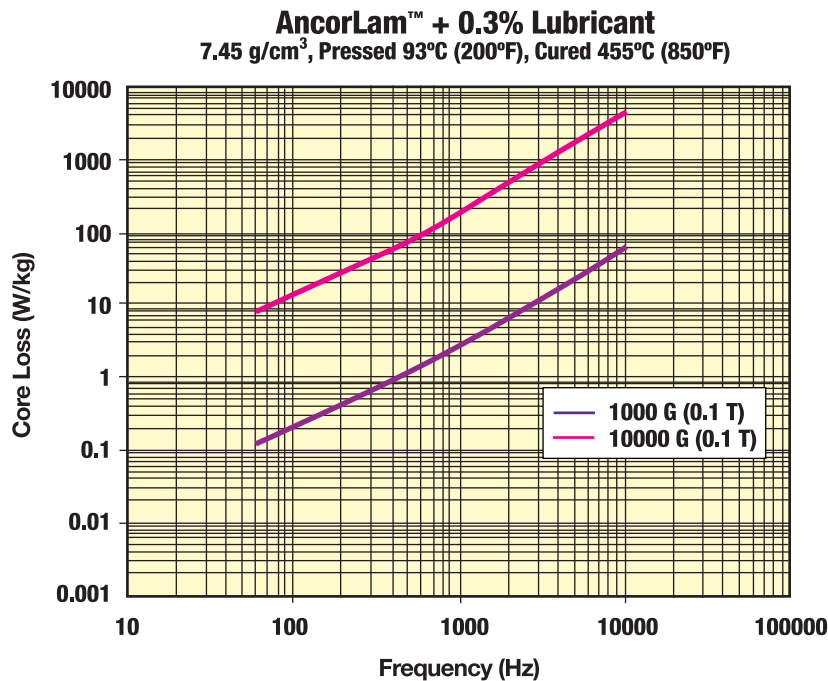
## Core Loss, Induction



**IMPORTANT NOTICE:** The data shown are based on laboratory processing standard test specimens. Results may vary from those obtained in production processing.

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## Core Loss, Frequency



## Physical Properties

**AncorLam™ + 0.3% Lubricant**  
Pressed 93°C (200°F), Cured 455°C (850°F)

Compaction Pressure	Cured Density	Cured Strength (TRS)	Cured Dimensional Change
MPa / tsi	g / cm <sup>3</sup>	MPa / psi	%
550 / 40	7.08	61 / 8,800	0.04
690 / 50	7.33	74 / 10,700	0.06
830 / 60	7.47	81 / 11,800	0.10

### Recommended Process Conditions for AncorLam™

- Compact with a die preheated to 80-107°C (175-225°F), target temperature is 93°C (200°F)
- Cure compacted parts at 400-455°C (750-850°F), target temperature is 455°C (850°F)
- AncorLam™ is available as a press ready premix with the option of 0.2%-0.5% lubricant

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