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/cm³ 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 \( \mu \)-ohm-cm
- AncorLam™ has a maximum operating temperature of 200°C (400°F)

DC Hysteresis

AncorLam™ + 0.3% Lubricant
7.45 g/cm³, Pressed 93°C (200°F), Cured 455°C (850°F)
Typical B-H Curves, AC

AncorLam™ + 0.3% Lubricant
7.45 g/cm², Pressed 93°C (200°F), Cured 455°C (850°F)

Core Loss, Induction

AncorLam™ + 0.3% Lubricant
7.45 g/cm², Pressed 93°C (200°F), Cured 455°C (850°F)

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

AncorLam™ + 0.3% Lubricant
7.45 g/cm³, Pressed 93°C (200°F), Cured 455°C (850°F)

Physical Properties

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

<table>
<thead>
<tr>
<th>Compaction Pressure</th>
<th>Cured Density</th>
<th>Cured Strength (TRS)</th>
<th>Cured Dimensional Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPA / tsi</td>
<td>g / cm³</td>
<td>MPA / psi</td>
<td>%</td>
</tr>
<tr>
<td>550 / 40</td>
<td>7.08</td>
<td>61 / 8,800</td>
<td>0.04</td>
</tr>
<tr>
<td>690 / 50</td>
<td>7.33</td>
<td>74 / 10,700</td>
<td>0.06</td>
</tr>
<tr>
<td>830 / 60</td>
<td>7.47</td>
<td>81 / 11,800</td>
<td>0.10</td>
</tr>
</tbody>
</table>

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

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