Co-NETIC® AA PERFECTION ANNEALED SHEET

DESCRIPTION
Co-NETIC® is a non-oriented 80% nickel-iron-molybdenum alloy which offers a saturation induction of about 0.8T (8000 G), low coercive forces, and extremely high initial permeability as well as maximum permeability with minimum hysteresis losses. Co-NETIC is suitable for shielding sensitive electronic equipment against low strength, low frequency magnetic fields.

SPECIFICATIONS

<p>| TYPICAL CHEMICAL COMPOSITION (WEIGHT %) |</p>
<table>
<thead>
<tr>
<th>Ni</th>
<th>Mo</th>
<th>Fe</th>
<th>Mn</th>
<th>Si</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>4.9</td>
<td>Balance</td>
<td>0.5</td>
<td>0.3</td>
</tr>
</tbody>
</table>

DC MAGNETIC PROPERTIES¹
Coercivity (Hc) .005 Oe [.4 A/m]
Maximum Permeability (µmax) ≥400,000
Permeability at flux density, B, of 40G ≥100,000
Flux density at µmax 3,000 G (0.3T)

AC (50 Hz) MAGNETIC PROPERTIES¹
Coercivity (Hc) .005 Oe [.4 A/m]
Maximum Permeability ≥100,000
Permeability, H=0.4 A/m ≥70,000
Flux density at µmax 3,000 G (0.3T)

PHYSICAL PROPERTIES*
Saturation Induction (Bs) 8,000 G [0.8T]
Density .316 lb/in³ [8.7 g/cm³]
Curie Temperature 830°F [410°C]
Saturation magnetostriction +1 × 10⁻⁶
Electrical Resistivity 55 µΩcm [349 ohm circ mil/ft]
Mean coefficient of thermal expansion (20–100 °C) 12 × 10⁻⁶/K [7 × 10⁻⁶/°F]
Thermal Conductivity 0.32 W/cm K [134 (BTU in)/(ft hr °F)]
Specific Heat 460 J Kg⁻¹ × °K⁻¹
Melting Temperature 2642°F [1450°C]

MECHANICAL PROPERTIES*
Hardness (HV) 90-120
Tensile strength (MPa) 450
Yield strength (MPa) 170
Elongation in 2” (%) 30

¹ measured using stamped rings of 0.35 mm (.014”) sheet thickness after perfection annealing.

*Note: All product data given in this data sheet are typical values based on the experience of the melt source. They are not part of material specification and do not guarantee particular characteristics.