Co-NETIC® AA PERFECTION ANNEALED FOIL

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

| TYPICAL CHEMICAL COMPOSITION (WEIGHT %) |
|-----------------|---|---|---|---|
| Ni | Mo | Fe | Mn | Si |
| 80 | 4.9 | Balance | 0.5 | 0.3 |

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

AC (50 Hz) MAGNETIC PROPERTIES¹
- Coercivity (Hc) | .005 Oe [.4 A/m]
- Maximum Permeability (μmax) | ≥150,000
- Permeability at 0.4 A/m | ≥80,000

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 toroidal core sample of 0.05 mm [.002"] 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.