

Technical Data:

Product Description

Neway offers a range of high-performance Magnetic Alloys for Metal Injection Molding, including MIM-Fe-50Ni, MIM-Fe-3Si, MIM-Fe-50Co, MIM-2200, and MIM-430L. These advanced materials provide specialized magnetic, mechanical, and corrosion-resistant properties. Ideal for manufacturing intricate components with exceptional durability, Neway's MIM-Magnetic Alloys enable innovative solutions for diverse industries and applications.

Features and Applications

| Grade | Features | Applications |
|-----------------------|---|--|
| MIM-Fe-50Ni | High magnetic strength | Sensors, actuators, motors |
| MIM-Fe-3Si | Excellent corrosion resistance | Magnetic shielding, aerospace components |
| MIM-Fe-50Co | Superior temperature stability | Magnetic couplings, medical devices |
| MIM-2200 (Fe-2%Ni) | Balanced magnetic properties and structure | Solenoids, transformers, magnetic cores |
| MIM-430L | Good magnetic response and stainless properties | Electronics, automotive components |

Chemical Composition

| Magnetic Alloy | Iron (Fe) (%) | Nickel (Ni) (%) | Silicon (Si) (%) | Cobalt (Co) (%) | Chromium (Cr) (%) | Carbon (C) (%) | Manganese (Mn) (%) | Others (%) |
|-----------------------|---------------|-----------------|------------------|-----------------|-------------------|----------------|--------------------|--------------|
| MIM-Fe-50Ni | 50 | 50 | 0.3 | - | - | <0.02 | <0.20 | Balance (Fe) |
| MIM-Fe-3Si | 96.5 | - | 3 | - | - | <0.05 | <0.10 | - |
| MIM-Fe-50Co | 50 | - | - | 50 | - | <0.02 | <0.10 | Balance (Fe) |
| MIM-2200 (Fe-2%Ni) | 98 | 2 | - | - | - | <0.05 | <0.10 | - |
| MIM-430L | 80 | - | - | - | 17 | <0.008 | <0.40 | Balance (Fe) |

Physical and Mechanical

| Alloys | Status | Tensile Strength | Yield Strength | Impact Strength | Hardness | Young's Modulus | Poisson's Ratio | Elongation | Density |
|-----------------------|----------|------------------|----------------|-----------------|----------|-----------------|-----------------|--------------|-------------------|
| | | Mpa | Mpa | J | HRB | Gpa | Ratio | % in 25.4 mm | g/cm ³ |
| MIM-Fe-50Ni | Sintered | 500 | 300 | 25 | 30 | 160 | 0.29 | 10 | 7.5 |
| MIM-Fe-3Si | Sintered | 450 | 250 | 20 | 28 | 140 | 0.3 | 12 | 7.2 |
| MIM-Fe-50Co | Sintered | 520 | 320 | 30 | 32 | 175 | 0.28 | 9 | 7.7 |
| MIM-2200 (Fe-2%Ni) | Sintered | 480 | 280 | 22 | 29 | 150 | 0.31 | 11 | 7.4 |
| MIM-430L | Sintered | 420 | 220 | 18 | 27 | 130 | 0.32 | 14 | 7 |

Note

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | www.newayprecision.com | Contact Neway

