Sintered Neodymium-Iron-Boron Magnets

These are also referred to as "Neo" or NdFeB magnets. They offer a combination of high magnetic output at moderate cost. Please contact Arnold for additional grade information and recommendations for protective coating. Assemblies using these magnets can also be provided.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Units</th>
<th>min.</th>
<th>nominal</th>
<th>max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$B_r$, Residual Induction</td>
<td>Gauss</td>
<td>12,800</td>
<td>13,150</td>
<td>13,500</td>
</tr>
<tr>
<td>$H_{c,B}$, Coercivity</td>
<td>kA/m</td>
<td>860</td>
<td>943</td>
<td>1027</td>
</tr>
<tr>
<td>$H_{c,J}$, Intrinsic Coercivity</td>
<td>kA/m</td>
<td>12,000</td>
<td>11,850</td>
<td>12,900</td>
</tr>
<tr>
<td>$BH_{max}$, Maximum Energy Product</td>
<td>MGOe</td>
<td>40</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td>$kJ/m^3$</td>
<td>318</td>
<td>334</td>
<td>350</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Reversible Temperature Coefficients (1) of Induction, $\alpha(B_r)$ %/°C
2. Coercivity, $\alpha(H_{c,J})$ %/°C
3. Coefficient of Thermal Expansion (2) $\Delta L/L$ per °C × 10^-6
4. Thermal Conductivity $W / (m \cdot K)$
5. Specific Heat (3) $J / (kg \cdot K)$
6. Curie Temperature, $T_c$ °C
7. Flexural Strength psi
8. Hardness, Vickers $H_v$
9. Electrical Resistivity, $\rho$ $\mu\Omega \cdot cm$

Material: N42

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