CarTech® Hypocore™ Alloy

**COMPOSITION (NOMINAL)**

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>Co</th>
<th>Mn</th>
<th>Si</th>
<th>Cr</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.005</td>
<td>5.00</td>
<td>1.00</td>
<td>2.30</td>
<td>0.30</td>
<td>Balance</td>
</tr>
</tbody>
</table>

CarTech Hypocore alloy, offers performance benefits between those found in Carpenter's high performance, high cobalt content magnetic material, CarTech Hiperco® family alloys, and commercial silicon-base alloys.

This new electrical steel alloy can provide lower core loss compared to CarTech Hiperco family alloys. Compared to Si steels, the alloy provides higher induction, even at a low applied magnetic field. Additionally, the alloy can be used at higher frequencies with less heat generation. CarTech Hypocore alloy exhibits properties such as low coercivity, high permeability, and high electrical resistivity which helps motors and generators operate more efficiently.

CarTech Hypocore alloy offers potential benefits to next generation electrical machines and electromagnetic devices such as laminations or assembled cores for small machines where increasing efficiency and reducing size is important.

**MECHANICAL PROPERTY DATA**

- 0.2% YS (ksi/MPa): 42/290
- UTS (ksi/MPa): 57/393
- % Elongation: 10
- Saturation Induction: 21 kG
- Electrical Resistivity: 52 μΩ.cm
- Corecivity: 0.28 Oe

**BENEFITS**
- High induction at low fields
- Low core loss

**PRODUCT FORMS**
- Strip - .002" to .200"

**SPECIFICATIONS**
- US Patent Pending

**APPLICATIONS**
- Laminations or assembled cores for electromagnetic devices.
Applications specifically suggested for material described herein are made solely for the purpose of illustration to enable the reader to make his/her own evaluation and are not intended as warranties, either express or implied, of fitness for these or other purposes. There is no representation that the recipient of this literature will receive updated editions as they become available.


Copyright 2016 CRS Holdings, Inc. All Rights Reserved.