TECHNICAL DATA

**Material:** Copper graphite

**Content:** Copper & graphite powder

**Application:** Slip ring

### Values (as guideline)

- **Max current density:** 24 A/cm² Continuously
- **Peak current:** 35 A/cm² 3 min at 25 m/s
- **Max peripheral speed:** 50 m/s
- **Brush pressure:** 200-300 cN/cm²

### Material data (typical values)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk density</td>
<td>3.1 g/cm³</td>
<td>DIN IEC 413.204 &amp; ASTM C830</td>
</tr>
<tr>
<td>Rockwell hardness</td>
<td>50 HR&lt;sub&gt;10/60&lt;/sub&gt;</td>
<td>DIN IEC 413.303</td>
</tr>
<tr>
<td>Flexural strength</td>
<td>30 N/mm²</td>
<td>DIN IEC 413.501</td>
</tr>
<tr>
<td>Specific electrical resistivity</td>
<td>1.3 µΩm</td>
<td>DIN IEC 413.402</td>
</tr>
</tbody>
</table>

### Operational characteristics

- **Voltage drop (Uc) between brush & slip ring at 25 m/s**

  - Uc (V) vs. S (A/cm²)

- **Coefficient of friction (µ) at a current density of 20 A/cm²**

  - µ vs. V (m/s)

**Experimental conditions**

- **Slip ring material:** Phosphor bronze (PB1)
- **Brush pressure:** 225 cN/cm²
- **Temperature:** 60-85 °C
- **Current:** AC 50 Hz

This data sheet is intended to provide general information and are not guaranteed specific properties in field applications. Figures may vary depending on environment and type of application.

### MSDS

According to KEMI, the Swedish Chemicals Agency, carbon brushes, including metal graphite brushes, are classified in the REACH regulation as articles and do not require a Materials Safety Data Sheet.

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