**Molykote® P-37 Paste**

**FEATURES & BENEFITS**
- Compatible with high temperatures (1400°C)
- Excellent load-carrying capacity and seize protection
- Sulphur content of less than 250 ppm, with a total halogen content (including chlorine) of less than 200 ppm
- Low seepage, so it can be used in places wherein cleanliness is required
- Allows screws to be removed easily even after extended periods of use at high temperatures
- Does not include components that become brittle at high temperatures

**APPLICATIONS**
- Suitable for screws, nuts and bolts that are subjected to extremely high temperatures and which are made of heat-resistant or extremely heat resistant steels, e.g. those made from nickel-based alloys.
- Used successfully for the bolted joints of gas and steam turbines in power stations.

**TYPICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Test¹</th>
<th>Property</th>
<th>Unit</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appearance</td>
<td></td>
<td>Gray black</td>
</tr>
<tr>
<td>ISO 2137</td>
<td>Unworked penetration</td>
<td>mm/10</td>
<td>280 to 310</td>
</tr>
<tr>
<td>ISO 2811</td>
<td>Density at 20°C</td>
<td>g/cm³</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>Service temperature²</td>
<td>°C</td>
<td>-30 to 1400</td>
</tr>
<tr>
<td></td>
<td>Total halogen content</td>
<td>ppm</td>
<td>200 (max)</td>
</tr>
<tr>
<td></td>
<td>Sulphur content</td>
<td>ppm</td>
<td>250 (max)</td>
</tr>
<tr>
<td>DIN 51 350 T.4</td>
<td>Four ball weld load (1450 rpm 1 minute)</td>
<td>N</td>
<td>5,500</td>
</tr>
<tr>
<td>DIN 51 350 T.5</td>
<td>Four ball wear scar (1450 rpm, 800N, 1 hour)</td>
<td>mm</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Coefficient of friction in bolted connection, M12 x 1.75, 8.8, blackened:

\[
\mu_{\text{thread}} / \mu_{\text{head}} = 0.11 / 0.11
\]

Breakaway torque, M-12 bolts 21CrMoNiV57 1.7709, nuts and washers 21CrMo5 1.7258, 600°C for 21 hours:

<table>
<thead>
<tr>
<th></th>
<th>Nm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tightening Torque</td>
<td>49.4</td>
<td></td>
</tr>
<tr>
<td>Breakaway Torque</td>
<td>120.9</td>
<td></td>
</tr>
</tbody>
</table>

Breakaway torque, Nimonic NiCr20TiAl bolts, nuts and washers 2.4952, 850°C for 4 weeks:

<table>
<thead>
<tr>
<th></th>
<th>Nm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tightening Torque</td>
<td>49.4</td>
<td></td>
</tr>
<tr>
<td>Breakaway Torque</td>
<td>102.4</td>
<td></td>
</tr>
</tbody>
</table>

¹ISO: International Standardisation Organisation

²DIN: Deutsche Industrie Norm

³Temperature resistance of solid lubricant
HOW TO USE
Clean and degrease the location of use before applying this product. Use a wire brush to remove any sludge or rust on the screws. Carefully apply the paste to fully coat the screws. Do not mix with other lubricants.

HANDLING PRECAUTIONS
PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE
When stored between 0°C and 35°C in the original unopened containers, this product has a usable life of 60 months from the date of production.

PACKAGING INFORMATION
This product is available in different standard container sizes. Detailed container size information should be obtained from your nearest Dow Corning sales office or Dow Corning distributor.

LIMITATIONS
This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION
To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

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The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer’s tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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