Bolt Protection Caps

ISO-9001 Certified Company - fm537405

Radolid

ADVANCE PRODUCTS & SYSTEMS

Now With Volatile Corrosion Inhibitors (VCI) Patent Pending*

*Patent Pending only applies to Radolid Caps with VCI

ISO-9001 Certified Company - FM537405
Radolid® Protection Caps are used to eliminate corrosion of nuts and bolts, allowing quick removal when necessary. These caps are easily installed by pressing onto the bolted joint by hand. The barbed edge snaps in place, preventing the caps from accidentally being removed. Manufactured of low density UV-resistant polyethylene, these caps are reusable and will keep nuts and bolts corrosion free for years.

KleerGel® Corrosion Inhibitor
KleerGel® Corrosion Inhibitor is a heavy-duty, synthetic lubricant. It is non-staining, non toxic, non-flammable and free of contamination, allowing the KleerGel® to maintain a good viscosity over wide temperature ranges (-50°F to 500°F). It is FDA approved and can be utilized on potable water systems or food processing equipment without contaminating the water or other products.

Variety of Types

Type ESW/EBM
The cap is produced in a two component molding. These new caps feature a captive soft sealing lip made from Evoprene; an elastic, flexible material that can be adapted to suit the base, hence providing an excellent seal. The cap body is made from a more solid material, guaranteeing a reliable and stable hold.

- Suitable for offshore applications and other high humidity industries
- Comes in a number of different designs
- Can be supplied for locknuts and threaded ends

KleerGel® Corrosion Inhibitor Benefits
- Heavy-duty, synthetic lubricant
- Non-staining
- Non-flammable
- Maintains good viscosity from -50°F to 500°F
- FDA approved
- Lasts four times longer than petroleum based lubricants
- Reduces energy consumption by decreasing friction
- Machinery shows less wear and will run cooler thereby increasing its life expectancy
- Excellent adhesion - will not drip, run or evaporate
- Dielectric - will not conduct electricity
- Will not damage wood, leather, plastic, fabrics, metals or painted surfaces
- Hydrophobic - 100% waterproof and will not wash out with hot, cold or salt water

NEW!
Volatile Corrosion Inhibitors (VCIs) are a class of corrosion inhibiting compounds, some or all of whose ingredients have sufficient energy (vapor pressure) to release molecules from the resin compound into the air and block the corrosive effects of electrolytes. VCI molecules condense in a microscopic layer on all surfaces they can reach. For VCI to work properly, caps must be secured on the head of the bolt or nut fitting flush with the surface of the flange or substrate. This is to maintain the VCI’s integrity under the cap. Radolid® protection caps with VCI additive are the only nut and bolt caps available in the market. Radolid® caps with VCI can be reused 2 to 3 times before requiring grease to be added to the fitting.

**Radolid® Specifications**

| Size Range: 1/4” to 3 3/4” diameter bolt or stud | Standard Operating Temperature (°F): |
| Minimum Height .................................................3/8” | Minimum ................................................. -84 |
| Maximum Height .....................................................8” | Maximum ................................................... +210* |

* other high temp material available to 430°F

**Thermoplastic Synthetic Materials for Radolid® Caps**

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>PLASTIC TYPE</th>
<th>DENSITY</th>
<th>HARDNESS</th>
<th>TEMPERATURE RESISTANCE</th>
<th>BREAKDOWN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>LD-PE</td>
<td>0.918</td>
<td>96 A/45 D</td>
<td>212°F (100°C)</td>
<td>100 KV/mm</td>
</tr>
<tr>
<td>Special</td>
<td>Polypropylene PP</td>
<td>0.905</td>
<td>98 A/62 D</td>
<td>266°F (130°C)</td>
<td>90 KV/mm</td>
</tr>
<tr>
<td></td>
<td>Polyesterelastomer</td>
<td>1.250</td>
<td>98 A/72 D</td>
<td>320°F (160°C)</td>
<td>23 KV/mm</td>
</tr>
<tr>
<td></td>
<td>Polyamid PA 66</td>
<td>1.140</td>
<td>99 A/70 D</td>
<td>428°F (220°C)</td>
<td>50 KV/mm</td>
</tr>
<tr>
<td></td>
<td>ETFE</td>
<td>1.700</td>
<td>99 A/70 D</td>
<td>428°F (220°C)</td>
<td>140 KV/mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESISTANCE</th>
<th>STANDARD</th>
<th>POLYPROPYLENE PP</th>
<th>POLYESTERELASTOMER</th>
<th>POLYAMID PA 66</th>
<th>ETFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESISTANT TO</td>
<td>Grease, oils, alcohol, fuels, non-oxidizing acids and lyes, water and sea water</td>
<td>Grease, oils, alcohol, fuels, detergents, water and seawater, watery solutions; such as solutions of salts, acids and lyes</td>
<td>Grease, oils, alcohol, fuels, detergents, water and sea water, aliphatic and aromatic compounds, 50% sulphuric acid</td>
<td>Grease, oils, alcohol, fuels, detergents, water and sea water, solvents, lyes</td>
<td>Grease, oils, chlorine, nitric acid, hydrochloric acid</td>
</tr>
<tr>
<td>NOT RESISTANT TO</td>
<td>Oxidizing agents, chlorohydrocarbons</td>
<td>Aromatic, halogenised hydrocarbons, oxidising agents; such as nitric acid</td>
<td>Hydrochloric acid, fluoric acid, chlorine gases</td>
<td>Acids, oxidising agents</td>
<td>Fluorine, fluorine hydrocarbon, fluorine acids</td>
</tr>
</tbody>
</table>

**What is VCI?**

Volatile Corrosion Inhibitors (VCIs) are a class of corrosion inhibiting compounds, some or all of whose ingredients have sufficient energy (vapor pressure) to release molecules from the resin compound into the air and block the corrosive effects of electrolytes. VCI molecules condense in a microscopic layer on all surfaces they can reach. For VCI to work properly, caps must be secured on the head of the bolt or nut fitting flush with the surface of the flange or substrate. This is to maintain the VCI’s integrity under the cap. Radolid® protection caps with VCI additive are the only nut and bolt caps available in the market. Radolid® caps with VCI can be reused 2 to 3 times before requiring grease to be added to the fitting.
To Order Please Specify The Following:

1. Bolt Diameter (flat to flat)
2. Model
3. Special length caps, if required
4. Colors other than black

Other Quality Products Available

- Kleerband® Flange Protectors
- Casing Insulators and End Seals
- Innerlynx® - Modular Mechanical Seals
- IsoJoint® - Monolithic Isolators
- Foreman Night Caps - temporary pipe plugs
- Standard Isolating Gasket Kits
- Integra SSA® - Cathodic Isolation Gaskets
- GAL-VO-PLAST® Wall Sleeves
- U-Bolt Cote®
- Safety Spray Shields

Advance Products & Systems, Inc. is not responsible for errors printed in this brochure.

Advance Products & Systems, Inc. shall repair or replace (within the limitations of such applicable express written warranty as may be issued by it) any product or portions thereof, which prove to be defective in workmanship or material for a period of 12 months from shipment date. The foregoing in lieu of all warranties, express or implied, and all other obligations or liabilities on the part of APS, on account of the product which it may sell. In no event shall APS be liable for consequential or special damages: nor except as it may otherwise specifically agree in writing, installation, or other work which may be done upon or in connection with the product by APS/ the distribution / dealer or others. THE LIMITED WARRANTIES PROVIDED IN THIS AGREEMENT AND THE OBLIGATIONS AND LIABILITIES OF APS ARE THE ONLY WARRANTIES MADE BY APS AS TO THE PRODUCT. APS MAKES NO EXPRESS OR OTHER IMPLIED WARRANTIES, BY COURSE OF DEALING, USAGE OF TRADE, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE (WHETHER GENERAL OR SPECIFIC), OR OTHERWISE.