FLANGE INSULATION KIT FAILURES IN HIGH-TORQUE APPLICATIONS

NEW FSP GUIDELINES FOR FLANGE INSULATION KITS

There is concern of extrusion and cracking of insulation kit sleeve and washer assemblies in high-torque applications.
NEW FSP GUIDELINES FOR FLANGE INSULATION KITS
This bulletin is to address the installation problems many have experienced in high-torque applications. Complaints of the Minlon (integral) sleeve assemblies extruding and the cracking of Phenolic type washers in higher pressure flange applications is the issue. When this situation occurs the result is failure of proper flange insulation and or cathodic protection. Fluid Sealing Products has changed it’s “guidelines” for these applications.

Our Recommendation
Flanges using 1 1/8” diameter and larger stud bolts, FSP will provide G-10 washers and Mylar sleeving as a standard kit. See specifications for comparison.

<table>
<thead>
<tr>
<th>Material</th>
<th>Dielectric Strength Volts per Mil of Thk.</th>
<th>Maximum Temperature</th>
<th>Water Absorption</th>
<th>Tensile Strength PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minion</td>
<td>1,200</td>
<td>180</td>
<td>.22</td>
<td>18,900</td>
</tr>
<tr>
<td>G-10</td>
<td>800</td>
<td>285-FR4</td>
<td>.15</td>
<td>40,000</td>
</tr>
<tr>
<td>Mylar</td>
<td>4,000</td>
<td>300</td>
<td>.8</td>
<td>13,000</td>
</tr>
</tbody>
</table>

The G-10 washers will handle the higher compressive loads as required by the larger diameter bolts and higher pressure rated flanges. Noted below in blue.

* Performance data published on norplex-micarta.com
Your specific application may require other recommendations.
Sleeve & Washer Materials

- Phenolic
- Mylar
- Minlon (one piece sleeve & washer)
- NEMA GRE (glass reinforced epoxy)
- Garlock Non-Asbestos
- Garlock Gylon

*Special applications at customers request*

Fluid Sealing Products will continue to market Minlon sleeves in the appropriate applications as well as other material components.

Please contact us for further information. 800.460.1028
PRODUCT LINE SHEET

SPECIALITY FABRICATED METAL GASKETS
- Spiral Wound
- Ring Type Joint (RTJ)
- Petromec (RTJ Rubber Coated)
- Heat Exchanger
- Corrugated Valve Bonnet
- Graphonic and Tephonic Gaskets

DIE CUT GASKETS & SHEET GOODS
- Graphite
- Teflon
- Natural & Synthetic Rubber
- Cork
- Phenolic
- Vegetable Fiber
- OEM(s): Garlock, Durabla, Klinger

PLATINGS & COATINGS
- Cadmium/Zinc
- IMF3W
- Xylan
- OEM(s): Aerocote, Whitford

CUSTOM FABRICATED PLASTICS

EXPANSION JOINTS
- Rubber
- Teflon
- OEM(s): Garlock, Unaflex
- Metal
- Flue Duct
- OEM(s): Unaflex

STUD BOLTS & FASTENERS
- All Sizes & Threads
- B7, B7M, B8, B8M
- Double Ends - Tap Ends
- B16, L7 with Nuts Assembled
- Hex Head Cap Screws
- Machine Bolts
- Special Bent Bolts
- J, L, and U Bolts

LUBRICATION
- Compounds
- Sealants
- Lubricants
- OEM(s): Jetlube

SPECIALITY ITEMS

FLANGE INSULATION KITS FOR CATHODIC PROTECTION • EXPANSION JOINTS
- Pikotek Brand Insulation Kits
- Flange Wraps
- Flange End Protectors
- Flange Bands with Grease Zerk
- Fittings
- Pipe End Caps

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