TIVAR® H.O.T. UHMW-PE

Developed specifically to excel in chemical and thermocycling environments with temperatures ranging up to 135°C (275°F), TIVAR® H.O.T. is becoming the material of choice for baking, food processing & packaging, conveyor manufacturing, grain processing and many other major industries where temperatures are too high for standard TIVAR® (but below the need for Teflon or other thermoplastics).

Key Benefits

- Extends material wear-life
- Excels in supported applications up to 135°C (275°F) when standard UHMW breaks down
- Lasts up to 10 times longer than standard UHMW in higher temperature environments
- Resists abrasion, corrosion, chemicals and moisture
- Exhibits excellent release characteristics

Tensile Comparison

<table>
<thead>
<tr>
<th>Weeks exposed at 135°C (275°F)</th>
<th>Tensile (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>20</td>
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<tr>
<td>24</td>
<td>30</td>
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<tr>
<td>36</td>
<td>40</td>
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<tr>
<td>48</td>
<td>50</td>
</tr>
<tr>
<td>60</td>
<td>60</td>
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</table>

Change in Izod Impact

<table>
<thead>
<tr>
<th>Weeks exposed at 135°C (275°F)</th>
<th>kJ/mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>-10</td>
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<tr>
<td>32</td>
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<tr>
<td>64</td>
<td>-40</td>
</tr>
<tr>
<td>80</td>
<td>-50</td>
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Sand Wheel Testing

<table>
<thead>
<tr>
<th>Weeks exposed at 135°C (275°F)</th>
<th>Abrasion Index</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>250</td>
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<tr>
<td>24</td>
<td>500</td>
</tr>
<tr>
<td>36</td>
<td>750</td>
</tr>
<tr>
<td>48</td>
<td>1000</td>
</tr>
</tbody>
</table>

Change in Izod Impact Sand Wheel Testing Tensile Comparison

Change in Izod Impact Sand Wheel Testing

Weeks exposed at 135°C (275°F)

Change in Izod Impact Sand Wheel Testing

Weeks exposed at 135°C (275°F)
**Industries**
- Baking
- Chemical
- Confectionery
- Conveyor manufacturing
- Dairy
- Food processing & packaging
- Grain processing
- Medical

**Availability**

**Sizes**
- 48” x 120” sheets with gauges ranging from 1/16” to 6”
- 48” x 240” sheets with gauges ranging from 3/4” to 3”
- Rod sizes from 0.5” to 6”
- Other sizes available on request

**Shapes**
- Standard Shapes
- Custom Profiles
- Rod
- Tube
- Sheet

**Common Applications**
- Chain guides
- Conveyor components
- Flights & paddles
- Guide rails
- Liners
- Seals & valves
- Wearstrips, pads, & plates
- Rollers & sprockets
- Grain drag flights

**Product Applications**

**Food Processing**
Rollers, sprockets and wearstrips manufactured from TIVAR® H.O.T. for applications in food processing show no signs of wear after numerous chemical and water washdowns, unlike their stainless steel counterparts.

**Grain Processing**
Grain drag flights manufactured from TIVAR® H.O.T. last longer and perform better in higher temperatures or where chemicals such as Hexane are used than those manufactured from standard UHMW.

**Proofing Ovens**
TIVAR® H.O.T. J-leg wearstrips are used in proofing ovens or food dehydrators.

**Candy Mixing Paddles**
TIVAR® H.O.T. candy mixing paddles solve discoloration, galling and wear problems associated with other thermoplastic materials.