UP-30
Long-wearing UHMW Polyethylene
Material Data Sheet
M-4 (Rev. 01; 08-08-17)
Overview

UP-30 is an ultra-high molecular weight (UHMW) polyethylene-based material that offers excellent sealing performance in temperatures from cryogenic, ~450 °F to 180 °F (-268 °C to 82 °C). Its unique physical properties make it superior to PTFE-based materials in reciprocating applications sealing aqueous solutions. UP-30 has been optimized for use in ultra-high performance liquid chromatography (UHPLC) pumps where long life is expected.

Chemical Compatibility

UP-30 is compatible with acids and bases. This material is compatible with most fluids.

For more compatibility information, request report TR-60A, or go to www.balseal.com/technical-library. Select Technical Reports, then select TR-60A, Chemical Compatibility Guide.

FDA and USP Compliance

UP-30 is FDA compatible for use in food contact. Bal Seal Engineering defines “FDA compatible” as compositions where the majority (97% or more) of the ingredients have received an FDA “safe for use in food contact” review.

Color

Yellow-gold
Mechanical Properties of UP-30

<table>
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<tr>
<th>ASTM Standard</th>
<th>Tensile Strength at Break</th>
<th>Elongation at Break</th>
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<tr>
<td>D638</td>
<td>5900 psi (407 bar)</td>
<td>330%</td>
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Advantages of UP-30

- Suitable for high pressure rotary and reciprocating applications
- High chemical resistance
- High wear and pressure/extrusion resistance
- Temperature range of -450 °F to 180 °F

Other Information

For additional information, please contact a technical sales representative at one of our offices nearest you. Bal Seal Engineering, Inc. maintains a vast library of material references and testing information.