



UP-40 Long-wearing UHMW Polyethylene

Material Data Sheet
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Overview

UP-40 is an ultra-high molecular weight (UHMW) polyethylene-based material similar to UP-30, but made from a lower molecular weight polyethylene. It was designed for high-performance liquid chromatography (HPLC) pumps, and offers excellent sealing performance in reciprocating applications from cryogenic, -450 °F to 180 °F (-268 °C to 82 °C).

Chemical Compatibility

UP-40 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 Compliant

UP-40 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-40

ASTM Standard	Tensile Strength at Break Typical	Elongation at Break Typical
D638	6400 psi (441 bar)	320%

Advantages of UP-40

- Suitable for medium pressure reciprocating and rotary 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.

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