



# UP-30 Long-wearing UHMW Polyethylene

Material Data Sheet  
M-4 (Rev. 01; 08-08-17)

19650 Pauling  
Foothill Ranch, CA  
USA 92610-2610

t +1 949 460 2100  
f +1 949 460 2300

Jollemanhof 16, 5th floor  
1019 GW Amsterdam  
The Netherlands

t +31 20 638 6523  
f +31 20 625 6018

Suite 901, Chinachem  
Century Tower  
178 Gloucester Road,  
Wanchai, Hong Kong

t +852 28681860  
f +852 22956753

[www.balseal.com](http://www.balseal.com)



## 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](http://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

ASTM Standard	Tensile Strength at Break Typical	Elongation at Break Typical
D638	5900 psi (407 bar)	330%

## 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.

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