

Distinguishing Features of Bal Seal Polyethylene-based Materials (M1 - M5)

	M 1	M 3	M 4	M 5
	(UPC-10) UHMW	(UPC-16) UHMW	(UP-30) UHMW	(UP-40) UHMW Composition
Application	Industrial	Industrial	HPLC-long life	HPLC-long life
Chemical Compatibility	Excellent compatibility with most fluids.	Excellent compatibility with most fluids.	Compatible with acids and bases.	Compatible with acids and bases.
FDA Compliance <small>(Request Research Report 50-640 for Bal Seal's definition of FDA compliant and compatible).</small>	"FDA compliant"	"FDA compliant" Resin processed under contaminant-free conditions	"FDA compatible"	"FDA compatible"
Media	Aqueous solutions	Aqueous solutions	Aqueous solutions	Aqueous solutions
Temperature	Limited to 180°F (82°C)	Limited to 180°F (82°C)	Limited to 180°F (82°C)	Limited to 180°F (82°C)
Tensile Strength	7,500 to 8,100 psi (510 to 569 kg/cm ²)	7,500 to 8,100 psi (510 to 569 kg/cm ²)	5,000 psi (352 kg/cm ²)	5,400 psi (380 kg/cm ²)
Elongation	405 to 412%	405 to 412%	310%	450%
Distinguishing Applications	<ul style="list-style-type: none"> - Food contact - Industrial - Fluid components 	<ul style="list-style-type: none"> - Food contact - Industrial - Fluid components 	<ul style="list-style-type: none"> - Liquid chromatography - Ink dispensing - Cryogenic equipment 	<ul style="list-style-type: none"> - Cryogenic components - Laboratory Equipment - Pump and valve components
Color	White, translucent	White, translucent	Yellow-gold	Yellow-gold
Cost	\$ (Based on the polyethylene material)	\$ (Based on the polyethylene material)	\$\$\$	\$\$\$

It is essential that the customer run evaluation testing under actual service conditions with a sufficient safety factor to determine if the proposed, supplied, or purchased, Bal Seal Engineering products are suitable for the intended purpose and to confirm expected results. Bal Seal Engineering makes no warranty, express or implied, regarding Bal Seal Engineering products or of the information contained herein, including but not limited to, warranties of merchantability, performance, and fitness for a particular use or purpose. Bal Seal Engineering shall not be liable for any loss or damage of any kind or nature that may result from the use of, reference to, or reliance on, the information contained herein, including, but not limited to, consequential, special (including loss of profits) direct, indirect, incidental, or similar damages, even if Bal Seal Engineering has been advised of the possibility of such damages. © 2010 Bal Seal Engineering, Inc. M-21 Rev. D (623-20 and 623-64) 04-13-10

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Distinguishing Features of Bal Seal Polyethylene-based Materials (M 37 - M 39)

	M 36 (UPC-16 HT) UHMW	M 38 (UP-30 HT) UHMW	M 39 (UP-40 HT) UHMW
Application	Industrial	HPLC-long life	HPLC-long life
Chemical Compatibility	Excellent compatibility with most fluids.	Compatible with acids and bases.	Compatible with acids and bases.
FDA Compliance <small>(Request Research Report 50-640 for Bal Seal's definition of FDA compliant and compatible).</small>	"FDA compliant" Resin processed under contaminant-free conditions	"FDA compatible"	"FDA compatible"
Media	Aqueous solutions	Aqueous solutions	Aqueous solutions
Temperature	Limited to 180°F (82°C)	Limited to 180°F (82°C)	Limited to 180°F (82°C)
Tensile Strength	7,500 to 8,100 psi (510 to 569 kg/cm ²)	5,000 psi (352 kg/cm ²)	To 5,400 psi (380 kg/cm ²)
Elongation	405 to 412%	310%	450%
Distinguishing Applications	<ul style="list-style-type: none"> - Food contact - Industrial - Fluid components 	<ul style="list-style-type: none"> - Liquid chromatography pumps - Paint spraying equipment - Cryogenic components 	<ul style="list-style-type: none"> - Ink dispensing - Cold adhesives and epoxy - Laboratory Equipment
Color	White, translucent	Yellow-gold	Yellow-gold
Cost	\$ (Based on the polyethylene material)	\$\$\$	\$\$\$

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