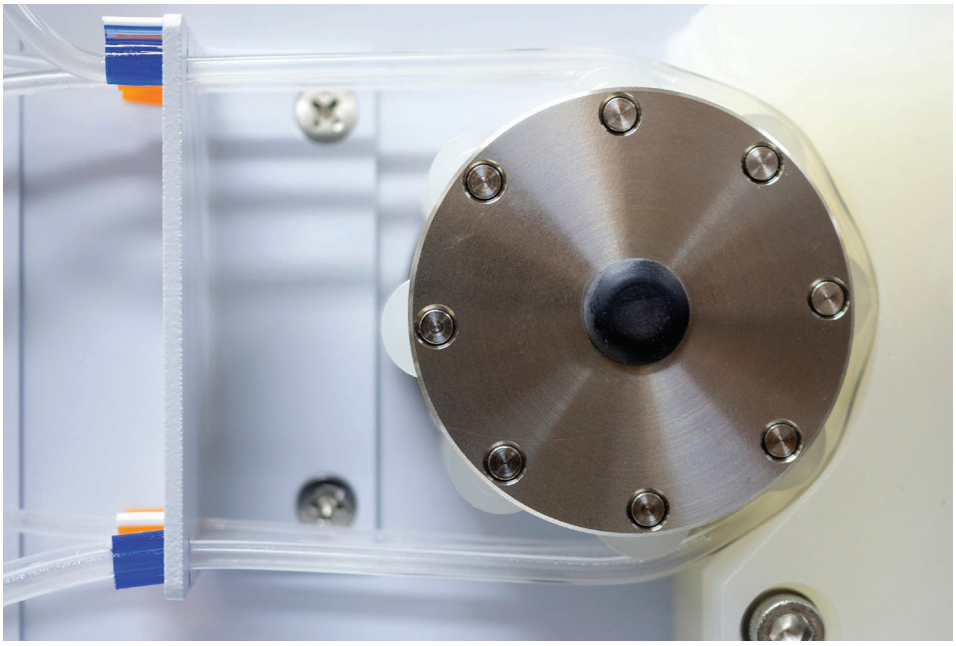
Medalist®

Thermoplastic Elastomers (TPEs) for Biopharma Tubing



Exceptional clarity. Reduced spallation. Extended pump tube life. Transfer and pump segment tubing play a crucial role in the production of highly specialized biopharmaceutical medications. Choosing the right material is essential for optimal tubing performance. Our new MD-90000 series offer a wide range of advantages over traditional materials such as rubber and silicone, making Medalist® an outstanding choice due to its recyclability, ability to be processed using standard thermoplastic processing equipment, fast cycle times, generally lower unit cost on a volume basis, weldability, low permeability, low tackiness and wide-ranging regulatory compliance.

Why Medalist® TPEs for Biopharma Tubing?

- **Clarity:** Overall, the MD-90000 Series is designed with optical clarity in mind. Moving beyond simply seeing fluid in motion to gaining clear visibility to the inside of the tube is something **MD-91970** does exceptionally well.
- **Reduced spallation:** While the entire MD-90000 series exhibits excellent resistance to spallation, minimizing the risk of particulate contamination, **MD-91760** offers an unbeatable combination of spallation resistance and clarity.
- **Compression set:** MD-91760 and MD-91970 deliver up to 50% better performance than other leading TPE biopharma tubing grades.
- **Biocompatibility and safety:** MD-90000 Series TPEs are made with FDA-compliant, biocompatible ingredients, free of DEHP, phthalates, BPA, latex, and animal-derived materials.
- **Sterilizable:** The MD-90000 series can be sterilized with a wide range of methods commonly used in the industry, such as EO, gamma, E-Beam, X-ray and autoclaving.
- **Excellent flexibility and durability:** MD-90000 series offers superior flexibility and durability, ensuring smooth fluid flow and long-lasting performance.
- **Chemical resistance:** Our TPEs are resistant to a wide range of chemicals, such as isopropyl alcohol, acids, bases, and disinfectants like chlorine and bleach.
- **Regulatory compliance:** The MD-90000 series is manufactured in an ISO 13485-certified facility and meets relevant standards such as USP Class VI and ISO 10993-5.

New Grades			MD-91760	MD-91970	MD-96267	MD-92260	MD-91255
Target Application			High-Performance Pump Tubing	High-Performance Pump Tubing	High-Performance Pump Tubing	Fluid Transfer & Pump Tubing	Fluid Transfer Tubing
Typical Properties	**ASTM Method**	**Units**					
Hardness (5s delay)	D2240	Shore A	63	72	65	62	58
Specific Gravity	D792	–	0.90	0.90	0.89	0.89	0.89
Tensile Stress at 100% Strain	D412	psi (MPa)	2.05	3.06	2.15	2.02	2.03
Tensile Stress at 50% Strain	D412	psi	1.73	2.57	1.86	1.61	1.59
Tensile Strength (Break)	D412	psi (MPa)	10.5	11.1	11.6	13.9	8.35
Tensile Elongation (Break)	D412	%	623	659	852	723	735
Tear Strength (Die C, 20 in/min)	D624	lbf/in (N/mm)	38.9	50.6	39.7	47.3	39.3
Compression Set 73°F (23°C), 22 hr	D395	%	15.8	19.6	38.7	15.2	20.8
Compression Set 158°F (70°C), 22 hr	D395	%	34.0	47.7	51.5	80.7	53.2
Melt Flow Index (200°C, 5 kg)	D1238	g/10 min	–	–	5	–	4
Melt Flow Index (230°C, 5 kg)	D1238	g/10 min	1	1	–	1	–
Spallation After 24 Hours	–	Spall Quantity (mg)	8	14	22	37	31
Comparative Clarity	–	(1 = Most Clear)	2	1	5	4	3

The Clear Choice: Medalist® MD-90000 Series TPEs for Biopharma Tubing

With a long history of providing high-quality materials for the healthcare industry, Teknor Apex is your trusted partner for reliable, innovative TPE compounds that meet your demanding standards.

Contact us today to discuss how Medalist® TPEs can meet your needs with enhanced clarity, reduced spallation, and extended pump tube life.

AMERICAS
505 Central Avenue
Pawtucket, RI 02561
401-725-8000
800-556-3864

EUROPE
Mijnweg 1
6167AC Geleen
Netherlands
31(0) 46 7020950

ASIA
41 Shipyard Road
Singapore 628134
(011) 65-6265-2544

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