



# Medalist®

## Medical TPVs for Injection Molding

For medical device components requiring superior sealing performance, Medalist medical TPVs (Thermoplastic Vulcanizates) are the premier choice. The Medalist MD-23100 Series of TPVs are designed to replace thermoset rubber, with excellent sealing properties including low long-term compression set, high fatigue resistance, stability at high temperatures, and chemical resistance. Medalist medical TPVs are designed to meet the stringent demands of the healthcare industry in applications such as o-rings, seals and gaskets, valves, and diaphragms and other components used in the manufacture of medical devices.



### Medalist TPVs for Medical-Grade O-Rings and Seals

#### Why use Medalist Medical-Grade TPVs?

- » Low long-term compression set and elastic stability
- » Better stability at high temperatures than styrenic TPEs
- » Chemical resistant
- » Compatible with ethylene oxide sterilization
- » Non-hygroscopic; pre-drying not necessary
- » Light natural color for improved colorability versus standard TPVs
- » Well-suited for small, high-precision parts using complex multi-cavity tools
- » Suitable for injection molding and overmolding onto polypropylene

#### Regulatory Compliance

- » Made with FDA food grade compliant ingredients
- » Biocompatible, ISO 10993-5 compliant
- » REACH SVHC compliant
- » Free of DEHP, phthalates, BPA, and latex
- » Standard grades are ADM-free
- » Manufactured in an ISO-13485 certified facility

Table 1: Typical Properties of Medalist MD-23100 Series Medical Grade TPVs

Typical Properties	Test Method	Units	MD-23115	MD-23133	MD-23143	MD-23153	MD-23163	MD-23173
<b>Color</b>	---	---	opaque	opaque	opaque	opaque	opaque	opaque
<b>Specific Gravity</b>	D792	---	0.89	0.91	0.92	0.93	0.92	0.93
<b>Hardness (5 sec del)</b>	D2240	Shore A	15	33	43	53	63	73
<b>100% Modulus</b>	D412	psi	72	159	223	292	435	598
<b>300% Modulus</b>	D412	psi	208	363	434	---	682	894
<b>Tensile Strength</b>	D412	psi	256	409	500	512	753	1026
<b>Elongation</b>	D412	%	360	350	367	272	327	390
<b>Tear Strength (Die C, 20 in/min)</b>	D624	ibf/in	45	82	102	96	146	206
<b>Compression Set (73°F, 22 hr)</b>	D395	%	14.2	13.7	15.8	18.6	23.5	26.7
<b>Compression Set (158°F, 22 hr)</b>	D395	%	28.8	25.8	32.4	29.1	41.1	46.0
<b>Compression Set (212°F, 22 hr)</b>	D395	%	63.6	43.5	40.4	40.0	47.2	52.1
<b>Melt Mass-Flow Rate (200°C/5.0 kg)</b>	D1238	g/10 min	8	15	25	30	25	24

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