

# Medalist® MD-32045

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

## General Information

### Product Description

Medalist MD-32045 is a high performance thermoplastic elastomer specifically designed for overmolding and multi-shot molding applications in the healthcare/medical segment. Medalist MD-32045 is a medium hardness, medium density, halogen-free and translucent grade that bonds to ABS, PC/ABS, and PC.

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Abrasion Resistant • Bondability • Chemical Resistant • Filled • Good Colorability	• Good Flexibility • Good Flow • Good Impact Resistance • Good Moldability • Good Sterilizability	• Halogen Free • Lubricated • Medium Density • Medium Hardness
Uses	• Bonding • Medical/Healthcare Applications	• Overmolding • Soft Touch Applications	
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Injection Molding	• Multi Injection Molding	

## ASTM & ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.908	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>2</sup> (100% Strain)	4.34	MPa	ASTM D412
Tensile Stress <sup>2</sup> (300% Strain)	5.38	MPa	ASTM D412
Tensile Strength <sup>2</sup> (Break)	11.4	MPa	ASTM D412
Tensile Elongation <sup>2</sup> (Break)	320	%	ASTM D412
Tear Strength <sup>2</sup>	38.5	kN/m	ASTM D624
Compression Set <sup>3</sup> (23°C, 22 hr)	12	%	ASTM D395B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	43		
Shore A, 5 sec, Injection Molded	41		

### Legal Statement

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

## Processing Information

Injection	Nominal Value	Unit
Rear Temperature	160 to 182	°C

Revision Date: 5/18/2021

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Injection	Nominal Value	Unit
Middle Temperature	171 to 193	°C
Front Temperature	182 to 199	°C
Nozzle Temperature	182 to 199	°C
Processing (Melt) Temp	182 to 204	°C
Mold Temperature	16 to 38	°C
Injection Rate	Fast	
Back Pressure	0.172 to 0.689	MPa
Screw Speed	50 to 100	rpm
Cushion	3.81 to 25.4	mm

### Injection Notes

Dry the pellets for 2 to 4 hours at 150°F (65°C).

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C, 510 mm/min

<sup>3</sup> Type 1

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