



# Medalist® MD-489 (PRELIMINARY DATA)

Teknor Apex Company - Polyurethane

## General Information

### Product Description

Medalist MD-489 is a high performance polyurethane specifically designed for wire & cable and medical applications. Medalist MD-489 is a high hardness, medium density, RoHS compliant grade suitable for injection molding and extrusion.

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Bondability • Bromine Free • Good Colorability • Good Moldability	• Good Processability • High Elongation • High Hardness • Medium Density	• Medium Flow • Without Fillers
Uses	• Medical/Healthcare Applications	• Pharmaceuticals	• Wire & Cable Applications
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.03		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	6.0	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100 %	825	psi	ASTM D412
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength - Flow (Break)	2000	psi	ASTM D412
Tensile Elongation - Flow (Break)	700	%	ASTM D412
Tear Strength - Flow	400	lbf/in	ASTM D624
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 1 sec)	84		ASTM D2240

## Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Desiccant Dryer	185	°F
Drying Time	3.0	hr
Rear Temperature	360 to 400	°F
Middle Temperature	360 to 400	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	360 to 400	°F

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<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>
Processing (Melt) Temp	360 to 400	°F
Mold Temperature	60 to 90	°F
Injection Pressure	200 to 800	psi
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in
<b>Extrusion</b>	<b>Nominal Value</b>	<b>Unit</b>
Drying Temperature	185	°F
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	340 to 380	°F
Cylinder Zone 2 Temp.	340 to 380	°F
Cylinder Zone 3 Temp.	340 to 380	°F
Cylinder Zone 4 Temp.	340 to 380	°F
Cylinder Zone 5 Temp.	340 to 380	°F
Die Temperature	340 to 380	°F
<b>Extrusion Notes</b>		

Screw Speed: 30 to 100 rpm

#### Notes

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