Medalist® MD-41255 AP NAT XRD (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

General Information

Product Description

Medalist MD-41255 AP NAT XRD is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-41255 AP NAT XRD is a medium hardness, low density, RoHS compliant. Halogen-free grade that can be sterilized and is suitable for extrusion.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Autoclave Sterilizable • Bondability • Clean/High Purity • Ethylene Oxide Sterilizable	• Good Processing Stability • Kink Resistant • Low Density • Low Specific Gravity	• Medium Hardness • No Animal Derived Components • Radiation (Gamma) Resistant
Uses	• Medical Devices • Medical/Healthcare Applications	• Pharmaceuticals • Tubing	
Agency Ratings	• ISO 10993-5	• ISO 13485	
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color	• Translucent	
Forms	• Pellets		
Processing Method	• Extrusion		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.892		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	4.0	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	580	psi	ASTM D412
Tensile Strength (Break)	725	psi	ASTM D412
Tensile Elongation (Break)	200	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	60		
Shore A, 5 sec	57		

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Processing Information

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	280 to 320	°F
Cylinder Zone 2 Temp.	310 to 350	°F
Cylinder Zone 3 Temp.	320 to 360	°F
Cylinder Zone 4 Temp.	330 to 370	°F

Revision Date: 4/26/2023

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Extrusion	Nominal Value	Unit
Cylinder Zone 5 Temp.	370 to 410	°F
Adapter Temperature	340 to 360	°F
Melt Temperature	330 to 360	°F
Die Temperature	340 to 410	°F
Screw L/D Ratio	24.0:1.0 to 32.0:1.0	

Extrusion Notes

Minimum 24:1 L/D, preferably 30:1 L/D.

High shear screw preferred, barrier screw with Maddock mixing end is recommended.

Typical Screen Pack: 20/60/150/150/60/20, up to 250 mesh.

Extruder Head Pressure: 1000-1500 psi

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Notes

[1] Typical properties: these are not to be construed as specifications.

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