



Monprene® RG-12160 XRD1 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene RG-12160 XRD1 is specifically designed for food contact applications and other regulated markets such as children's and infants products. Monprene RG-12160 XRD1 is a medium hardness, low density grade that is suitable for injection molding and extrusion. Please contact your Teknor Apex rep for a regulatory letter as required.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Low Density • Low Specific Gravity • Lubricated	• Medium Flow • Medium Hardness • Slip	• Without Fillers
Uses	• Consumer Applications • Gaskets • Handles • Kitchenware	• Safety Equipment • Sporting Goods • Toothbrush Handles • Toys	• Tubing • Writing Instruments
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.890		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 ²			ASTM D412
Across Flow : 100% Strain	254	psi	
Flow : 100% Strain	556	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	415	psi	
Flow : 300% Strain	666	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	984	psi	
Flow : Break	755	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	650	%	
Flow : Break	390	%	
Tear Strength ²			ASTM D624
Across Flow	178	lbf/in	
Flow	129	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	24	%	
158°F, 22 hr	44	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	62		
Shore A, 5 sec, Injection Molded	60		

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Processing Information		
Injection	Nominal Value	Unit
Rear Temperature	356 to 446	°F
Middle Temperature	356 to 446	°F
Front Temperature	356 to 446	°F
Nozzle Temperature	356 to 446	°F
Processing (Melt) Temp	356 to 446	°F
Mold Temperature	95 to 120	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in
Injection Notes		
Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).		
Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	360 to 450	°F
Cylinder Zone 2 Temp.	370 to 460	°F
Cylinder Zone 3 Temp.	380 to 470	°F
Cylinder Zone 5 Temp.	390 to 480	°F
Die Temperature	390 to 480	°F
Extrusion Notes		
Screw Speed: 30 to 100 rpm		

Notes

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

² Die C, 20 in/min

³ Type 1