

Monprene® RG-12160 XRD1 (PRELIMINARY DATA)

Thermoplastic Elastomer
Teknor Apex Company

Message:
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 Information			
Features	Low Specific Gravity		
	Without Fillers		
	Low density		
	smoothness		
	Medium liquidity		
	Lubrication		
	Medium hardness		
Uses	Safety equipment		
	Handle		
	Kitchen utensils		
	Washer		
	Pipe fittings		
	Sporting goods		
	Toys		
	Stationery		
	Consumer goods application field		
RoHS Compliance	Toothbrush handle		
	RoHS compliance		
	Natural color		
	Particle		
	Extrusion		
Appearance	Injection molding		
Forms			
Processing Method			
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness		ASTM D2240	
Shore A, 1 second, injection molding	62	ASTM D2240	
Shore A, 5 seconds, injection molding	60	ASTM D2240	
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
Transverse flow: 100% strain	1.75	MPa	ASTM D412
Flow: 100% strain	3.83	MPa	ASTM D412
Transverse flow: 300% strain	2.86	MPa	ASTM D412
Flow: 300% strain	4.59	MPa	ASTM D412
Tensile Strength ²			ASTM D412
Transverse flow: Fracture	6.78	MPa	ASTM D412
Flow: Fracture	5.21	MPa	ASTM D412
Tensile Elongation ³			ASTM D412
Transverse flow: Fracture	650	%	ASTM D412
Flow: Fracture	390	%	ASTM D412
Tear Strength ⁴			ASTM D624
Transverse flow	31.2	kN/m	ASTM D624
Flow	22.6	kN/m	ASTM D624
Compression Set ⁵			ASTM D395B
23°C, 22 hr	24	%	ASTM D395B
70°C, 22 hr	44	%	ASTM D395B

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.

Injection	Nominal Value	Unit
Rear Temperature	180 - 230	°C
Middle Temperature	180 - 230	°C
Front Temperature	180 - 230	°C
Nozzle Temperature	180 - 230	°C
Processing (Melt) Temp	180 - 230	°C
Mold Temperature	35 - 49	°C
Injection Pressure	1.38 - 5.52	MPa
Injection Rate	Fast	
Back Pressure	0.172 - 0.689	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 25.4	mm

Injection instructions

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.	182 - 232	°C
Cylinder Zone 2 Temp.	188 - 238	°C
Cylinder Zone 3 Temp.	193 - 243	°C
Cylinder Zone 5 Temp.	199 - 249	°C
Die Temperature	199 - 249	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

NOTE

- | | |
|----|-------------------|
| 1. | C mold, 510mm/min |
| 2. | C mold, 510mm/min |
| 3. | C mold, 510mm/min |
| 4. | C mold, 510mm/min |
| 5. | Type 1 |

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