



Monprene® RG-10180

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

The Monprene RG-10100 series is a group of high performance thermoplastic elastomers specifically designed for regulated applications including food contact, toys, and children's products. Monprene RG-10180 is a low density, higher hardness grade that complies with various US FDA and European regulations and directives for food contact and toy safety and is suitable for injection molding. Please contact Teknor Apex for a regulatory compliance letter.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Europe	• Latin America • North America	
Features	• BPA Free • Food Contact Acceptable • Good Adhesion • Good Colorability • Good Processability	• High Hardness • Low Density • Low Specific Gravity • Lubricated • Medium Flow	• No Animal Derived Components • Slip • Without Fillers
Uses	• Closures • Consumer Applications • Cosmetic Packaging • Food Containers	• Food Packaging • Food Service Applications • Handles • Kitchenware	• Lids • Non-specific Food Applications • Rubber Replacement • Toys
Agency Ratings	• EU Food Contact	• FDA Food Contact	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	6.5	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Across Flow (100% Strain)	439	psi	ISO 37
Tensile Stress - Across Flow (Break)	2220	psi	ISO 37
Tensile Elongation - Across Flow (Break)	830	%	ISO 37
Tear Strength ²			ISO 34-1
Across Flow	220	lbf/in	
Flow	268	lbf/in	
Compression Set ³ (158°F, 22 hr)	37	%	ISO 815
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore A, 5 sec)	80		ISO 868
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (392°F, 206 sec ⁻¹)	269	Pa·s	ASTM D3835

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	320 to 350	°F
Middle Temperature	360 to 400	°F
Front Temperature	380 to 420	°F
Nozzle Temperature	360 to 440	°F
Processing (Melt) Temp	360 to 440	°F
Mold Temperature	80 to 120	°F
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 0.500	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).

Notes

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

² Method Ba, Angle (Unnicked)

³ Type A