Monprene® RG-14090

Teknor Apex Company - Thermoplastic Elastomer

Thursday, April 2, 2026

General Information

Product Description

The Monprene RG-14000 series is a group of high performance thermoplastic elastomers specifically designed for drinking water application. Monprene RG-14090 is a low density, high hardness grade with excellent adhesion to PP and complies with various US FDA and European regulations and directives for food contact and drinking water and is suitable for injection molding. Please contact Teknor Apex for a regulatory compliance letter.

General			
Material Status	• Preliminary Data		
Availability	• Europe		
Features	• Drinking Water Contact Acceptable • Food Contact Acceptable	• Good Colorability • Good Processability	• High Hardness • Low Density
Uses	• Fittings • Hose • Membranes	• Plumbing Parts • Potable Water Applications • Sanitary Products	• Valves/Valve Parts
Agency Ratings	• DVGW W270 • EU 10/2011	• FDA Food Contact • KTW	
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.892		ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	30	g/10 min	ISO 1133
Molding Shrinkage - Flow [2] (0.0787 in, Injection Molded)	0.015	in/in	Internal Method
Molding Shrinkage - Across Flow [2] (0.0787 in, Injection Molded)	0.010	in/in	Internal Method
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ISO 527
Across Flow : 50% Strain	812	psi	
Flow : 50% Strain	870	psi	
Tensile Stress			ISO 527
Across Flow : 100% Strain	812	psi	
Flow : 100% Strain	899	psi	
Tensile Stress			ISO 527
Across Flow : 300% Strain	972	psi	
Flow : 300% Strain	1160	psi	
Tensile Stress			ISO 527
Across Flow : Break	3050	psi	
Flow : Break	2030	psi	
Tensile Elongation			ISO 527
Across Flow : Break	900	%	
Flow : Break	550	%	
Tear Strength			ISO 34-1
Across Flow	417	lbf/in	
Flow	263	lbf/in	
Compression Set (73°F, 70 hr)	38	%	ISO 815

Revision Date: 6/29/2020

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Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore A, 3 sec	90		
Shore D, 3 sec	34		

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	356 to 428	°F
Middle Temperature	374 to 446	°F
Front Temperature	392 to 464	°F
Nozzle Temperature	392 to 464	°F
Processing (Melt) Temp	392 to 464	°F
Mold Temperature	86 to 104	°F
Injection Rate	Moderate-Fast	

Injection Notes

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

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	320 to 365	°F
Cylinder Zone 2 Temp.	356 to 383	°F
Cylinder Zone 3 Temp.	356 to 401	°F
Cylinder Zone 4 Temp.	356 to 401	°F
Cylinder Zone 5 Temp.	356 to 401	°F
Die Temperature	347 to 419	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm.

Notes

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

[2] Test plate: 150 mm x 100 mm x 2 mm

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