



# Monprene® RG-65050 NAT

Teknor Apex Company - Thermoplastic Elastomer

## General Information

### Product Description

Monprene RG-65050 NAT is a specialty thermoplastic elastomer used in regulated consumer applications and complies with various US FDA and European regulations and directives for food contact. Monprene RG-65050 NAT is a low hardness, low density, RoHS compliant grade suitable for injection molding and extrusion. Please contact Teknor Apex for a regulatory compliance letter.

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable • Good Adhesion • Good Colorability • Good Melt Strength	• Good Organoleptic Properties • Good Processability • Halogen Free • High Elongation	• High Tensile Strength • Low Compression Set • Low Density • Low Hardness
Uses	• Closures • Consumer Applications • Cookware Handles • Cups • Film • Fluid Handling	• Food Containers • Food Packaging • Food Service Applications • Gaskets • Kitchenware • Lids	• Non-specific Food Applications • Overmolding • Toothbrush Handles • Toys • Tubing
Agency Ratings	• EU Food Contact	• FDA	
RoHS Compliance	• RoHS Compliant		
Appearance	• Blue • Brown	• Colors Available • Grey	• Natural Color • Orange
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

## ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	9.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>2</sup>			ASTM D412
Across Flow : 100% Strain	193	psi	
Flow : 100% Strain	339	psi	
Tensile Stress <sup>2</sup>			ASTM D412
Across Flow : 300% Strain	270	psi	
Flow : 300% Strain	446	psi	
Tensile Strength <sup>2</sup>			ASTM D412
Across Flow : Break	1390	psi	
Flow : Break	655	psi	
Tensile Elongation <sup>2</sup>			ASTM D412
Across Flow : Break	> 1000	%	
Flow : Break	670	%	
Tear Strength <sup>2</sup>			ASTM D624
Across Flow	198	lbf/in	
Flow	166	lbf/in	

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Elastomers	Nominal Value	Unit	Test Method
Compression Set <sup>3</sup>			ASTM D395B
73°F, 22 hr	17	%	
158°F, 22 hr	92	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	54		
Shore A, 5 sec, Injection Molded	52		

### Processing Information

Injection	Nominal Value	Unit
Rear Temperature	340 to 440	°F
Middle Temperature	340 to 440	°F
Front Temperature	340 to 440	°F
Nozzle Temperature	340 to 440	°F
Processing (Melt) Temp	340 to 440	°F
Mold Temperature	60 to 90	°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.	340 to 440	°F
Cylinder Zone 2 Temp.	340 to 440	°F
Cylinder Zone 3 Temp.	340 to 440	°F
Cylinder Zone 4 Temp.	340 to 440	°F
Cylinder Zone 5 Temp.	340 to 440	°F
Die Temperature	340 to 440	°F

#### Extrusion Notes

Screw Speed: 30 to 100 rpm

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C, 20 in/min

<sup>3</sup> Type 1