



# Monprene® OM-10185

Teknor Apex Company - Thermoplastic Elastomer

## General Information

### Product Description

Monprene OM-10185 is a specialty thermoplastic elastomer, available in NAT and colors, designed for overmolding and co-extrusion applications like grips and anti-skid parts for consumer and industrial products. Monprene OM-10185 is a high hardness, low density, opaque grade that exhibits excellent adhesion to PC, ABS, and PC/ABS.

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Abrasion Resistant • Bondability • Good Color Stability • Good Colorability • Good Flow	• Good Mold Release • Good Moldability • Good Processability • Good Processing Stability • High Hardness	• Light Stabilized • Low Density • Low Specific Gravity • Medium Flow • Slip
Uses	• Appliances • Bonding • Cell Phones • Dental Applications	• Flexible Grips • Handles • Knobs • Overmolding	• Power/Other Tools • Sporting Goods • Toothbrush Handles • Writing Instruments
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.940		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>2</sup>			ASTM D412
Across Flow : 100% Strain	766	psi	
Flow : 100% Strain	1210	psi	
Tensile Stress - Across Flow <sup>2</sup> (300% Strain)	985	psi	ASTM D412
Tensile Strength <sup>2</sup>			ASTM D412
Across Flow : Break	1480	psi	
Flow : Break	1480	psi	
Tensile Elongation <sup>2</sup>			ASTM D412
Across Flow : Break	560	%	
Flow : Break	230	%	
Tear Strength <sup>2</sup>			ASTM D624
Across Flow	362	lbf/in	
Flow	312	lbf/in	
Compression Set <sup>3</sup>			ASTM D395B
73°F, 22 hr	22	%	
158°F, 22 hr	94	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	87		
Shore A, 5 sec, Injection Molded	85		
Additional Information	Nominal Value	Unit	
Adhesion to Nylon			

### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	140	°F
Drying Time	2.0 to 4.0	hr
Rear Temperature	400 to 460	°F
Middle Temperature	400 to 460	°F
Front Temperature	400 to 460	°F
Nozzle Temperature	400 to 460	°F
Processing (Melt) Temp	400 to 460	°F
Mold Temperature	60 to 90	°F
Injection Pressure	200 to 800	psi
Back Pressure	25.0 to 125	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in

#### Injection Notes

Moisture can degrade the material. Drying is suggested. This can be accomplished by placing the material in a desiccant dryer for 2 to 4 hours at 140°F (60°C).

For any overmolding process it is recommended that the process temperatures for the TPE material be set at least 50°F (10°C) higher than the melt temperature of the substrate material.

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	380 to 460	°F
Cylinder Zone 2 Temp.	380 to 460	°F
Cylinder Zone 3 Temp.	380 to 460	°F
Cylinder Zone 4 Temp.	380 to 460	°F
Cylinder Zone 5 Temp.	380 to 460	°F
Die Temperature	380 to 460	°F

#### 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