



Monprene® OM-16175

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene OM-16175 is a specialty thermoplastic elastomer designed for overmolding applications like grips and anti-skid parts for a variety of consumer and industrial products. Monprene OM-16175 is a medium hardness, low density opaque grade that is available in Black, Natural, and can be pre-colored, and exhibits excellent adhesion to nylon.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Bondability • Good Adhesion • Good Colorability • Good Mold Release	• Good Moldability • Good Processability • Light Stabilized • Lubricated	• Medium Density • Medium Flow • Medium Hardness • Slip
Uses	• Bonding • Cell Phones • Flexible Grips	• Handles • Knobs • Overmolding	• Power/Other Tools • Rubber Replacement • Sporting Goods
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Colors Available	• Natural Color
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.960		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	20	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	370	psi	
Flow : 100% Strain	432	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	697	psi	
Flow : 300% Strain	849	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	1190	psi	
Flow : Break	1090	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	490	%	
Flow : Break	420	%	
Tear Strength ²			ASTM D624
Across Flow	215	lbf/in	
Flow	205	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	41	%	
158°F, 22 hr	76	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	77		
Shore A, 5 sec, Injection Molded	75		
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	360 to 400	°F
Middle Temperature	360 to 400	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	360 to 400	°F
Processing (Melt) Temp	360 to 400	°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.	340 to 380	°F
Cylinder Zone 2 Temp.	340 to 380	°F
Cylinder Zone 3 Temp.	340 to 380	°F
Cylinder Zone 4 Temp.	340 to 380	°F
Cylinder Zone 5 Temp.	340 to 380	°F
Die Temperature	340 to 380	°F

Notes

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

² Die C, 20 in/min

³ Type 1