



Monprene® OM-10220

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene OM-10220 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-10220 is a low 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	• Bondability • Good Flow • Good Mold Release • Good Moldability • Good Processability	• Good Processing Stability • Light Stabilized • Low Density • Low Hardness • Low Specific Gravity	• Lubricated • Medium Flow • Slip • Soft
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 ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.940		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	95.0	psi	
Flow : 100% Strain	91.0	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	197	psi	
Flow : 300% Strain	186	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	630	psi	
Flow : Break	568	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	690	%	
Flow : Break	710	%	
Tear Strength ²			ASTM D624
Across Flow	97.0	lbf/in	
Flow	91.0	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	15	%	
158°F, 22 hr	85	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	22		
Shore A, 5 sec, Injection Molded	20		
Additional Information	Nominal Value	Unit	
Adhesion to ABS			
Adhesion to PC			
Adhesion to PC/ABS			

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	140	°F	
Drying Time	2.0 to 4.0	hr	
Rear Temperature	380 to 420	°F	
Middle Temperature	380 to 420	°F	
Front Temperature	380 to 420	°F	
Nozzle Temperature	380 to 420	°F	
Processing (Melt) Temp	380 to 420	°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.	360 to 400	°F
Cylinder Zone 2 Temp.	360 to 400	°F
Cylinder Zone 3 Temp.	360 to 400	°F
Cylinder Zone 4 Temp.	360 to 400	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	360 to 400	°F

Notes

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

² Die C, 20 in/min

³ Type 1