



Monprene® OM-12250-02

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene OM-12250-02 is a specialty thermoplastic elastomer designed for overmolding and co-extrusion applications like grips and anti-skid parts for consumer and industrial products. Monprene OM-12250-02 is a medium hardness, medium density, RoHS compliant 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 Colorability • Good Compression Set • Good Mold Release	• Good Moldability • Good Processability • Light Stabilized • Low Flow	• Lubricated • Medium Density • Medium Hardness • Without Fillers
Uses	• Appliances • Bonding • Cell Phones • Flexible Grips	• Handles • Knobs • Overmolding • Power/Other Tools	• Sporting Goods • Writing Instruments
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMFZ2.E54709		
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	0.980		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	242	psi	
Flow : 100% Strain	296	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	418	psi	
Flow : 300% Strain	479	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	1120	psi	
Flow : Break	1100	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	670	%	
Flow : Break	670	%	
Tear Strength ²			ASTM D624
Across Flow	172	lbf/in	
Flow	162	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	18	%	
158°F	65	%	

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	52		
Shore A, 1 sec, Injection Molded ⁴	62		
Shore A, 5 sec, Injection Molded ⁴	60		
Thermal	Nominal Value	Unit	Test Method
RTI Elec	122	°F	UL 746B
RTI Imp	122	°F	UL 746B
RTI Str	122	°F	UL 746B
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in, All Colors)	HB		UL 94
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	320 to 380	°F
Middle Temperature	320 to 380	°F
Front Temperature	320 to 380	°F
Nozzle Temperature	320 to 380	°F
Processing (Melt) Temp	320 to 380	°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.

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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	320 to 360	°F
Cylinder Zone 2 Temp.	320 to 360	°F
Cylinder Zone 3 Temp.	320 to 360	°F
Cylinder Zone 4 Temp.	320 to 360	°F
Cylinder Zone 5 Temp.	320 to 360	°F
Die Temperature	320 to 360	°F

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² Die C, 20 in/min
- ³ Type 1
- ⁴ Aged for 48 hr