



Monprene® OM-19450 NAT (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene OM-19450 NAT is part of a series of adhesion-modified thermoplastic elastomers (available from 40 to 70 Shore A) designed for over-molding (insert and multi-shot) and co-extrusion onto many engineering thermoplastics, including: PC, ABS, PC/ABS, CoPE, PET, PBT, PMMA, PSA, ASA, SAN, POM, and more. These materials exhibit dry haptics and are well suited for grips and other soft-touch parts. Monprene OM-19450 NAT is REACH-SVHC and RoHS compliant and offers several benefits including superior adhesion onto polystyrene and easy molding with a wide processing window.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Bondability • Chemical Resistant • Conformable • Crack Resistant • Good Colorability	• Good Flexibility • Good Flow • Good Impact Resistance • Good Moldability • Good Scratch Resistance	• Good Toughness • Halogen Free • Low Compression Set • Low Hardness • Medium Density
Uses	• Bonding • Consumer Applications • Gaskets • Industrial Applications	• Industrial Parts • Knobs • Lids • Overmolding	• Pipe Seals • Safety Equipment • Soft Touch Applications
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Injection Molding	• Multi Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.10		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	25	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ² (100% Strain)	150	psi	ASTM D412
Tensile Strength ² (Break)	600	psi	ASTM D412
Tensile Elongation ² (Break)	720	%	ASTM D412
Tear Strength ²	140	lbf/in	ASTM D624
Compression Set ³ (73°F, 22 hr)	25	%	ASTM D395
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	52		
Shore A, 5 sec, Injection Molded	50		
Additional Information	Nominal Value	Unit	
Adhesion to ABS			
Adhesion to COPE			
Adhesion to PBT			
Adhesion to PC			
Adhesion to PC/ABS			
Adhesion to PMMA			
Adhesion to POM			

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	3.0 to 4.0	hr
Rear Temperature	356 to 428	°F
Middle Temperature	392 to 464	°F
Front Temperature	410 to 482	°F
Nozzle Temperature	410 to 482	°F
Processing (Melt) Temp	410 to 482	°F
Mold Temperature	90 to 130	°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 strongly suggested to enhance bondability.

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.

Notes

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

² Die C, 20 in/min

³ Type 1