

Monprene® OM-10255

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene OM-10255 is designed for overmolding applications like grips and anti-skid parts for consumer products. Monprene OM-10255 is a natural-colored grade that exhibits excellent adhesion to PC, ABS, and PC/ABS.

General Information			
UL YellowCard	E54709-245346	E54709-245347	
Features	Sunlight Resistant		
	Without Fillers		
	smoothness		
	Light stabilization		
	Adhesiveness		
	Medium liquidity		
	Medium density		
	Medium hardness		
Uses	UV absorption		
	Handle		
	overmolding		
	Kitchen utensils		
	Sporting goods		
	Stationery		
	Consumer goods application field		
	Toothbrush handle		
UL File Number	QMFZ2.E54709		
Appearance	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.998	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding ¹	45		ASTM D2240
Shore A, 5 seconds, injection molding ²	55		ASTM D2240

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
Transverse flow: 100% strain ³	1.48	MPa	ASTM D412
Flow: 100% strain ⁴	1.65	MPa	ASTM D412
Transverse flow: 300% strain ⁵	2.90	MPa	ASTM D412
Flow: 300% strain ⁶	3.27	MPa	ASTM D412
Tensile Strength ⁷			ASTM D412
Transverse flow: Fracture	5.67	MPa	ASTM D412
Flow: Fracture	5.87	MPa	ASTM D412
Tensile Elongation ⁸			ASTM D412
Transverse flow: Fracture	550	%	ASTM D412
Flow: Fracture	540	%	ASTM D412
Compression Set ⁹			ASTM D395B
23°C, 22 hr	42	%	ASTM D395B
70°C, 22 hr	91	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
RTI Elec	50.0	°C	UL 746
RTI Imp	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.00 to 1.20mm, All Colors)	HB		UL 94
Additional Information	Nominal Value	Unit	
Adhesion Strength - Cohesive Failure	51	N	
Adhesion to ABS			
Adhesion to PC			
Adhesion to PC/ABS			
Injection	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	2.0 - 4.0	hr	
Rear Temperature	138 - 188	°C	
Middle Temperature	154 - 199	°C	
Front Temperature	154 - 216	°C	
Nozzle Temperature	154 - 221	°C	
Processing (Melt) Temp	166 - 221	°C	
Mold Temperature	10.0 - 32.2	°C	
Injection Pressure	1.38 - 5.52	MPa	
Injection Rate	Moderate-Fast		
Back Pressure	0.172 - 0.862	MPa	
Screw Speed	50 - 100	rpm	
Cushion	3.81 - 25.4	mm	
Injection instructions			
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.			

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	138 - 149	°C
Cylinder Zone 2 Temp.	149 - 160	°C
Cylinder Zone 3 Temp.	160 - 182	°C
Cylinder Zone 5 Temp.	160 - 182	°C
Die Temperature	160 - 182	°C

Extrusion instructions

Screw Speed: 30 to 100 rpm

NOTE

1. Aging 0 hr at 23°C
2. Aging 48 hr at 23°C
3. Mouth die C, 510mm/min
4. Mouth die C, 510mm/min
5. C mold, 510mm/min
6. C mold, 510mm/min
7. C mold, 510mm/min
8. Mouth die C, 510mm/min
9. Type 1

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