

# Monprene® OM-12341 XRD1 (Preliminary Data)

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene OM-12341 XRD1 is a specialty thermoplastic elastomer, available in NAT, BLK, and colors, designed for overmolding applications like grips and anti-skid parts for consumer and industrial products. Monprene OM-12341 XRD1 is a low hardness, medium density, filled grade that exhibits excellent adhesion to polystyrene(PS) and can be processed via injection and multi-injection molding.

General Information			
Features	Excellent Processability		
	Adhesiveness		
	Good adhesion		
	Medium liquidity		
	Good chemical resistance		
	Fill		
	Hardness, low		
	Medium density		
Uses	Washer		
	Soft handle		
	Rubber substitution		
	Footwear		
	Bonding		
RoHS Compliance	RoHS compliance		
Appearance	Black		
	Available colors		
	Natural color		
Forms	Particle		
Processing Method	Multiple injection molding		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.990	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	43		ASTM D2240
Shore A, 5 seconds, injection molding	40		ASTM D2240

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>1</sup>			ASTM D412
Transverse flow: 100% strain	1.25	MPa	ASTM D412
Flow: 100% strain	1.50	MPa	ASTM D412
Transverse flow: 300% strain	1.90	MPa	ASTM D412
Flow: 300% strain	2.40	MPa	ASTM D412
Tensile Strength <sup>2</sup>			ASTM D412
Transverse flow: Fracture	4.00	MPa	ASTM D412
Flow: Fracture	2.90	MPa	ASTM D412
Tensile Elongation <sup>3</sup>			ASTM D412
Transverse flow: Fracture	720	%	ASTM D412
Flow: Fracture	490	%	ASTM D412
Tear Strength <sup>4</sup>			ASTM D624
Transverse flow	28.0	kN/m	ASTM D624
Flow	19.0	kN/m	ASTM D624
Compression Set <sup>5</sup>			ASTM D395B
23°C, 22 hr	14	%	ASTM D395B
70°C, 22 hr	96	%	ASTM D395B

Additional Information	Nominal Value
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Adhesion to PS

Legal statement
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Injection	Nominal Value	Unit
Rear Temperature	175 - 195	°C
Middle Temperature	180 - 200	°C
Front Temperature	195 - 215	°C
Nozzle Temperature	205 - 225	°C
Processing (Melt) Temp	188 - 210	°C
Mold Temperature	20 - 40	°C
Injection Pressure	1.38 - 6.89	MPa
Injection Rate	Moderate-Fast	
Back Pressure	0.172 - 0.345	MPa
Screw Speed	50 - 100	rpm
Cushion	3.81 - 25.4	mm

Injection instructions
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Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

NOTE
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1.	C mold, 510mm/min
2.	C mold, 510mm/min
3.	C mold, 510mm/min
4.	C mold, 510mm/min
5.	Type 1

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