

# Monprene® SP-19985 XRD1 (PRELIMINARY DATA)

Thermoplastic Elastomer  
Teknor Apex Company

**Message:**  
Monprene SP-19985 XRD1 is a high performance thermoplastic elastomer designed for a variety of consumer sporting goods applications including playground flooring requiring a soft, rubber-like feel. Monprene SP-19985 XRD1, available in NAT and colors, is a high hardness, medium density, UV stabilized grade that exhibits excellent abrasion resistance and is suitable for injection molding.

General Information			
Features	Sunlight Resistant		
	smoothness		
	Light stabilization		
	Good UV resistance		
	Good coloring		
	Good wear resistance		
	High liquidity		
	Lubrication		
	Fill		
	brominated		
	High hardness		
	Medium density		
	Flame retardancy		
Uses	Floor Material		
	Rubber substitution		
RoHS Compliance	RoHS compliance		
Appearance	Blue		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.02	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	18	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, injection molding	87		ASTM D2240

Shore A, 5 seconds, injection molding	85		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>1</sup>			ASTM D412
Transverse flow: 100% strain	5.25	MPa	ASTM D412
Flow: 100% strain	5.90	MPa	ASTM D412
Transverse flow: 300% strain	6.68	MPa	ASTM D412
Flow: 300% strain	7.46	MPa	ASTM D412
Tensile Strength <sup>2</sup>			ASTM D412
Transverse flow: Fracture	10.2	MPa	ASTM D412
Flow: Fracture	10.5	MPa	ASTM D412
Tensile Elongation <sup>3</sup>			ASTM D412
Transverse flow: Fracture	590	%	ASTM D412
Flow: Fracture	550	%	ASTM D412
Tear Strength <sup>4</sup>			ASTM D624
Transverse flow	39.9	kN/m	ASTM D624
Flow	44.8	kN/m	ASTM D624
Compression Set <sup>5</sup>			ASTM D395B
23°C, 22 hr	37	%	ASTM D395B
70°C, 22 hr	66	%	ASTM D395B
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	20	%	ASTM D2863

#### Legal statement

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Injection	Nominal Value	Unit
Rear Temperature	193 - 216	°C
Middle Temperature	193 - 216	°C
Front Temperature	193 - 216	°C
Nozzle Temperature	193 - 216	°C
Processing (Melt) Temp	193 - 216	°C
Mold Temperature	16 - 32	°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

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

NOTE	
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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#### Recommended distributors for this material

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