

Monprene® PC-13970 XRD1 (PRELIMINARY DATA)

Thermoplastic Elastomer
Teknor Apex Company

Message:
Monprene PC-13970 XRD1 is a high performance thermoplastic elastomer, available in NAT and colors, designed for a variety of personal care consumer product applications requiring a soft, rubber-like feel, including toothbrush articles. Monprene PC-13970 XRD1 is a medium hardness, medium density, UV stabilized grade that complies with various US FDA and European regulations and directives for food contact and is suitable for injection molding.

General Information	
Features	UV Stabilized
	High elasticity
	Workability, good
	Good coloring
	Good adhesion
	Medium liquidity
	Lubrication
	Compliance of Food Exposure
	Fill
	Medium density
	Medium hardness
Uses	Cosmetic Packaging
	Handle
	Kitchen utensils
	Washer
	Non-specific food applications
	Cover
	Food packaging
	Food service sector
	Food container
	Toys
	Rubber substitution
	Consumer goods application field
	Toothbrush handle
Agency Ratings	FDA Food Exposure, Not Rated
	European food contact, not rated

RoHS Compliance	RoHS compliance		
Appearance	Opacity		
	Available colors		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	12	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
Shaw A, 1 sec	72		ASTM D2240
Shaw A, 5 seconds	70		ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ISO 37
100% strain	2.30	MPa	ISO 37
300% strain	2.40	MPa	ISO 37
Tensile Strength (Break)	8.30	MPa	ISO 37
Tensile Elongation (Break)	700	%	ISO 37
Compression Set ¹			ISO 815
23°C, 22 hr	34	%	ISO 815
70°C, 22 hr	55	%	ISO 815
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 206 sec ⁻¹)	110	Pa · s	ISO 11443
Legal statement			
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Injection	Nominal Value	Unit	
Rear Temperature	120 - 160	°C	
Middle Temperature	160 - 230	°C	
Front Temperature	180 - 230	°C	
Nozzle Temperature	180 - 230	°C	
Processing (Melt) Temp	180 - 230	°C	
Mold Temperature	15 - 50	°C	
Injection Rate	Fast		
Back Pressure	0.500 - 1.50	MPa	
Screw Speed	50 - 100	rpm	
Cushion	3.00 - 20.0	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. Method B

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