



Monprene® SP-16478 NAT XRD1 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene SP-16478 NAT XRD1 is a general purpose thermoplastic elastomer designed for a variety of consumer product applications. Monprene SP-16478 NAT XRD1 is a high hardness, low density grade thermoplastic elastomer suitable for both injection molding and extrusion.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Abrasion Resistant • Chemical Resistant • Excellent Processability • Good Adhesion • Good Color Stability	• Good Colorability • Good Compression Set • Good Toughness • Halogen Free • High Hardness	• High Hardness • High Strength • Low Density • Low Flow • Low Specific Gravity
Uses	• Consumer Applications • Footwear • General Purpose	• Rubber Replacement • Safety Equipment • Soft Touch Applications	• Sporting Goods
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color	• Opaque	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.892		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	15	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ² (100% Strain)	508	psi	ASTM D412
Tensile Stress ² (300% Strain)	798	psi	ASTM D412
Tensile Strength ² (Break)	1800	psi	ASTM D412
Tensile Elongation ² (Break)	550	%	ASTM D412
Tear Strength ²	325	lb/in	ASTM D624
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	78		
Shore A, 5 sec, Injection Molded	76		

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	380 to 420	°F
Middle Temperature	380 to 420	°F

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Injection	Nominal Value	Unit
Front Temperature	380 to 420	°F
Nozzle Temperature	380 to 420	°F
Processing (Melt) Temp	380 to 420	°F
Mold Temperature	60 to 90	°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 not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	360 to 400	°F
Cylinder Zone 2 Temp.	360 to 400	°F
Cylinder Zone 3 Temp.	360 to 400	°F
Cylinder Zone 4 Temp.	360 to 400	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	360 to 400	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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

² Die C, 20 in/min