Monprene® PC-12166 NAT XRD1 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Thursday, April 2, 2026

General Information

Product Description

Monprene PC-12166 NAT XRD1 is a high performance thermoplastic elastomer designed for a variety of consumer product applications requiring a soft, rubber-like feel. Monprene PC-12166 NAT XRD1 is a medium hardness, that exhibits excellent elastic recovery. This grade is suitable for injection molding.

General			
Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• High Density	• Medium Hardness	
Uses	• Consumer Applications • Flexible Grips • Handles	• Overmolding • Personal Care • Soft Touch Applications	• Toothbrush Handles
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.27		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/1.0 kg)	19	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break)	479	psi	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	67		
Shore A, 5 sec, Injection Molded	65		

Legal Statement

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	360 to 450	°F
Middle Temperature	370 to 460	°F
Front Temperature	380 to 470	°F
Nozzle Temperature	390 to 480	°F
Processing (Melt) Temp	390 to 480	°F
Mold Temperature	95 to 120	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	

Revision Date: 5/13/2025

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Injection	Nominal Value	Unit
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).

Notes

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

Teknor Apex Company
Corporate Headquarters

In U.S. for Vinyls, TPEs, Colorants,

Engineered Thermoplastics (Chem Polymer)
505 Central Avenue
Pawtucket, Rhode Island 02861 U.S.

Phone: 401-725-8000
Fax: 401-725-8095
Toll Free (U.S. only) 800-556-3864

www.teknorapex.com
info@teknorapex.com

Teknor Apex B.V.

Brightlands Chemelot Campus Umonderbaan 22
6167 RD Geleen, Netherlands

Phone: +31 46 7020 950
Fax: +31 46 7020 990

www.teknorapex.com
tpe@teknorapex.com

Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.

No. 78 Ping Sheng Road

Suzhou Industrial Park
Jiangsu, China 215126

Phone: (86) 512-6287-1550
Fax: (86) 512-6288-8371

www.teknorapex.com
infotaap@teknoapex.com

Teknor Apex Asia Pacific PTE. LTD.

41 Shipyard Road

Singapore 628134

Phone: (65) 6265-2544
Fax: (65) 6265-1821

www.teknorapex.com
infotaap@teknorapex.com

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