

# Monprene® OM-12341 XRD1 (Preliminary Data)

## Teknor Apex Company - Thermoplastic Elastomer

Friday, June 30, 2017

### **General Information**

### **Product Description**

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			
Material Status	Preliminary Data		
Availability	<ul><li> Africa &amp; Middle East</li><li> Asia Pacific</li></ul>	<ul><li>Europe</li><li>North America</li></ul>	
Features	<ul><li>Bondability</li><li>Chemical Resistant</li><li>Excellent Processability</li></ul>	<ul><li>Filled</li><li>Good Adhesion</li><li>Low Hardness</li></ul>	<ul><li>Medium Density</li><li>Medium Flow</li></ul>
Uses	<ul><li>Bonding</li><li>Flexible Grips</li></ul>	<ul><li>Footwear</li><li>Grommets</li></ul>	Rubber Replacement
RoHS Compliance	<ul> <li>RoHS Compliant</li> </ul>		
Appearance	Black	<ul> <li>Colors Available</li> </ul>	<ul> <li>Natural Color</li> </ul>
Forms	• Pellets		
Processing Method	<ul> <li>Injection Molding</li> </ul>	Multi Injection Molding	

Specific Gravity   0.992	ASTM & ISO Properties <sup>1</sup>						
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         4.0 g/10 min         ASTM D1238           Elastomers         Nominal Value         Unit         Test Method           Tensile Stress 2         ASTM D412         ASTM D412           Across Flow : 100% Strain         181 psi         Psi           Tensile Stress 2         ASTM D412         ASTM D412           Across Flow : 300% Strain         276 psi         Psi           Flow : 300% Strain         348 psi         ASTM D412           Across Flow : Break         580 psi         Flow : Break           Flow : Break         580 psi         ASTM D412           Across Flow : Break         720 %         ASTM D412           Flow : Break         490 %         ASTM D624           Across Flow         160 lbf/in         ASTM D624	Physical	Nominal Value	Unit	Test Method			
Elastomers         Nominal Value         Unit         Test Method           Tensile Stress 2         ASTM D412           Across Flow : 100% Strain         218 psi           Flow : 100% Strain         276 psi           Flow : 300% Strain         276 psi           Flow : 300% Strain         348 psi           Tensile Strength 2         ASTM D412           Across Flow : Break         580 psi           Flow : Break         421 psi           Tensile Elongation 2         ASTM D412           Across Flow : Break         720 %           Flow : Break         490 %           Tear Strength 2         ASTM D624           Across Flow         160 lbf/in	Specific Gravity	0.992		ASTM D792			
Tensile Stress 2       ASTM D412         Across Flow : 100% Strain       181 psi         Flow : 100% Strain       218 psi         Tensile Stress 2       ASTM D412         Across Flow : 300% Strain       276 psi         Flow : 300% Strain       348 psi         Tensile Strength 2       ASTM D412         Across Flow : Break       580 psi         Flow : Break       421 psi         Tensile Elongation 2       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength 2       ASTM D624         Across Flow       160 lbf/in	Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238			
Across Flow : 100% Strain       181 psi         Flow : 100% Strain       218 psi         Tensile Stress 2       ASTM D412         Across Flow : 300% Strain       276 psi         Flow : 300% Strain       348 psi         Tensile Strength 2       ASTM D412         Across Flow : Break       580 psi         Flow : Break       421 psi         Tensile Elongation 2       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength 2       ASTM D624         Across Flow       160 lbf/in	Elastomers	Nominal Value	Unit	Test Method			
Flow: 100% Strain       218 psi         Tensile Stress²       ASTM D412         Across Flow: 300% Strain       276 psi         Flow: 300% Strain       348 psi         Tensile Strength²       ASTM D412         Across Flow: Break       580 psi         Flow: Break       421 psi         Tensile Elongation²       ASTM D412         Across Flow: Break       720 %         Flow: Break       490 %         Tear Strength²       ASTM D624         Across Flow       160 lbf/in	Tensile Stress <sup>2</sup>			ASTM D412			
Tensile Stress 2       ASTM D412         Across Flow : 300% Strain       276 psi         Flow : 300% Strain       348 psi         Tensile Strength 2       ASTM D412         Across Flow : Break       580 psi         Flow : Break       421 psi         Tensile Elongation 2       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength 2       ASTM D624         Across Flow       160 lbf/in	Across Flow: 100% Strain	181	psi				
Across Flow : 300% Strain Flow : 300% Strain Tensile Strength 2 Across Flow : Break Flow : Break Flow : Break Flow : Break Tensile Elongation 2 Across Flow : Break Flow : Break Tensile Elongation 4 Across Flow : Break Flow : Break Tensile Flom : Break Tensile Elongation 5 ASTM D412 Across Flow : Break Flow : Break Tear Strength 2 Across Flow Tear Strength 1 ASTM D624 Across Flow	Flow: 100% Strain	218	psi				
Flow : 300% Strain       348 psi         Tensile Strength²       ASTM D412         Across Flow : Break       580 psi         Flow : Break       421 psi         Tensile Elongation²       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength²       ASTM D624         Across Flow       160 lbf/in	Tensile Stress <sup>2</sup>			ASTM D412			
Tensile Strength 2       ASTM D412         Across Flow : Break       580 psi         Flow : Break       421 psi         Tensile Elongation 2       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength 2       ASTM D624         Across Flow       160 lbf/in	Across Flow: 300% Strain	276	psi				
Across Flow : Break 580 psi Flow : Break 421 psi  Tensile Elongation 2 ASTM D412 Across Flow : Break 720 % Flow : Break 490 %  Tear Strength 2 ASTM D624 Across Flow 160 lbf/in	Flow: 300% Strain	348	psi				
Flow : Break       421 psi         Tensile Elongation 2       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength 2       ASTM D624         Across Flow       160 lbf/in	Tensile Strength <sup>2</sup>			ASTM D412			
Tensile Elongation 2       ASTM D412         Across Flow : Break       720 %         Flow : Break       490 %         Tear Strength 2       ASTM D624         Across Flow       160 lbf/in	Across Flow : Break	580	psi				
Across Flow : Break 720 % Flow : Break 490 %  Tear Strength 2 ASTM D624 Across Flow 160   lbf/in	Flow : Break	421	psi				
Flow : Break 490 %  Tear Strength 2 ASTM D624  Across Flow 160   lbf/in	Tensile Elongation <sup>2</sup>			ASTM D412			
Tear Strength <sup>2</sup> Across Flow ASTM D624 Across Flow 160 lbf/in	Across Flow : Break	720	%				
Across Flow 160 lbf/in	Flow: Break	490	%				
	Tear Strength <sup>2</sup>			ASTM D624			
Flow  Compression Set <sup>3</sup> 73°F, 22 hr  158°F, 22 hr  1os Nominal Value Unit Test Method  Durometer Hardness  Shore A, 1 sec, Injection Molded  Shore A, 5 sec, Injection Molded  40	Across Flow	160	lbf/in				
Compression Set <sup>3</sup> 73°F, 22 hr 158°F, 22 hr 1extoness  Durometer Hardness Shore A, 1 sec, Injection Molded Shore A, 5 sec, Injection Molded 40	Flow	108	lbf/in				
73°F, 22 hr 158°F, 22 hr  Hardness  Durometer Hardness Shore A, 1 sec, Injection Molded Shore A, 5 sec, Injection Molded 40	Compression Set <sup>3</sup>		LIB	ASTM D395B			
158°F, 22 hr  Hardness  Durometer Hardness  Shore A, 1 sec, Injection Molded Shore A, 5 sec, Injection Molded 40  Normal Value Unit 2: Test Method  TEKNOR APPLICATION ASTM D2240  43  443  444  445	73°F, 22 hr	14,	%技有PD	吸分销商			
Durometer Hardness Shore A, 1 sec, Injection Molded Shore A, 5 sec, Injection Molded 40  Test Method  TEKNOR APPLICATION ASTM D2240  TEKNOR ASTM D2240  TEKNO	158°F, 22 hr	2世月 夕6	% 黑佩斯	5895851			
Durometer Hardness Shore A, 1 sec, Injection Molded Shore A, 5 sec, Injection Molded 40  ASTM D2240	Hardness	Nominal Value	<b>Unit</b> 电话:	Test Method			
Shore A, 1 sec, Injection Molded  Shore A, 5 sec, Injection Molded  40	Durometer Hardness	LINOR APPLICO	mw	ASTM D2240			
Shore A, 5 sec, Injection Molded 40	Shore A, 1 sec, Injection Molded	TEKNOPEX.Sh5					
	Shore A, 5 sec, Injection Molded	teknot 40					

Adhesion to PS

**Additional Information** 

Revision Date: 6/1/2016

Nominal Value Unit

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## Teknor Apex Company - Thermoplastic Elastomer

### **Legal Statement**

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

Processing Information				
Injection	Nominal Value Unit			
Rear Temperature	347 to 383 °F			
Middle Temperature	356 to 392 °F			
Front Temperature	383 to 419 °F			
Nozzle Temperature	401 to 437 °F			
Processing (Melt) Temp	370 to 410 °F			
Mold Temperature	68 to 104 °F			
Injection Pressure	200 to 1000 psi			
Injection Rate	Moderate-Fast			
Back Pressure	25.0 to 50.0 psi			
Screw Speed	50 to 100 rpm			
Cushion	0.150 to 1.00 in			
Interesting Nation		_		

**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**

- <sup>1</sup> Typical properties: these are not to be construed as specifications.
- <sup>2</sup> Die C, 20 in/min

#### Teknor Apex Company Corporate Headquarters

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<sup>&</sup>lt;sup>3</sup> Type 1