

## Technical Data

### Product Description

Ultramid B3L is an impact-modified, easy flowing injection molding PA6 grade for fast processing.

### Applications

Typical applications include impact-resistant articles such as housings, fittings, small parts and anchors.

### General

Material Status	• Commercial: Active		
Literature <sup>1</sup>	<ul style="list-style-type: none"> <li>• <a href="#">Technical Datasheet - ASTM (English)</a></li> <li>• <a href="#">Technical Datasheet - ISO (English)</a></li> </ul>		
UL Yellow Card <sup>2</sup>	<ul style="list-style-type: none"> <li>• <a href="#">E36632-531652</a></li> <li>• <a href="#">E41871-233694</a></li> </ul>		
Search for UL Yellow Card	<ul style="list-style-type: none"> <li>• <a href="#">BASF Corporation</a></li> <li>• <a href="#">Ultramid®</a></li> </ul>		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Impact Modifier		
Features	<ul style="list-style-type: none"> <li>• Fast Molding Cycle</li> <li>• Good Flow</li> </ul>	<ul style="list-style-type: none"> <li>• Good Impact Resistance</li> <li>• Impact Modified</li> </ul>	• Oil Resistant
Uses	• Fittings	• Housings	
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	<ul style="list-style-type: none"> <li>• Creep Modulus vs. Time (ISO 11403-1)</li> <li>• Isochronous Stress vs. Strain (ISO 11403-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Isothermal Stress vs. Strain (ISO 11403-1)</li> <li>• Secant Modulus vs. Strain (ISO 11403-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Shear Modulus vs. Temperature (ISO 11403-1)</li> <li>• Viscosity vs. Shear Rate (ISO 11403-2)</li> </ul>

Physical	Dry	Conditioned	Unit	Test Method
Density / Specific Gravity	1.10	--	g/cm <sup>3</sup>	ASTM D792 ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	100	--	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage - Flow (3.18 mm)	1.1	--	%	No Standard
Water Absorption				
Saturation	9.0	--	%	ASTM D570
Saturation, 23°C	9.0	--	%	ISO 62
Equilibrium, 50% RH	2.5	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.5	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2800	900	MPa	ISO 527-2
Tensile Strength				
Yield, 23°C	69.0	--	MPa	ASTM D638
Yield, 23°C	70.0	35.0	MPa	ISO 527-2
Tensile Elongation				
Yield, 23°C	4.0	--	%	ASTM D638
Yield, 23°C	4.0	18	%	ISO 527-2
Break, 23°C	25	--	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	25	> 50	%	ISO 527-2
Flexural Modulus				
23°C	2500	--	MPa	ASTM D790
23°C	2300	--	MPa	ISO 178



**Ultramid® B3L**

Polyamide 6

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Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	6.0	--	kJ/m <sup>2</sup>	
23°C	10 kJ/m <sup>2</sup>	No Break		
Charpy Unnotched Impact Strength				ISO 179
-30°C	No Break	--		
23°C	No Break	No Break		
Notched Izod Impact				
-40°C	53	--	J/m	ASTM D256
23°C	130	--	J/m	ASTM D256
23°C	15	--	kJ/m <sup>2</sup>	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	160	--	°C	ASTM D648
0.45 MPa, Unannealed	150	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	66.0	--	°C	ASTM D648
1.8 MPa, Unannealed	65.0	--	°C	ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418 ISO 3146
CLTE - Flow				
--	4.0E-5	--	cm/cm/°C	ASTM E831
--	8.5E-5	--	cm/cm/°C	No Standard
RTI Elec				UL 746
0.40 mm	65.0	--	°C	
0.8 mm	65.0	--	°C	
1.5 mm	65.0	--	°C	
3.0 mm	65.0	--	°C	
RTI Imp				UL 746
0.40 mm	65.0	--	°C	
0.8 mm	65.0	--	°C	
1.5 mm	65.0	--	°C	
3.0 mm	65.0	--	°C	
RTI Str				UL 746
0.40 mm	65.0	--	°C	
0.8 mm	65.0	--	°C	
1.5 mm	65.0	--	°C	
3.0 mm	65.0	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity				
1.50 mm	1.0E+15	1.0E+12	ohms·cm	ASTM D257
--	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Constant				IEC 60250
100 Hz	4.00	--		
1 MHz	3.50	6.40		
Dissipation Factor				IEC 60250
100 Hz	0.010	--		
1 MHz	0.024	0.24		
Comparative Tracking Index	600	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.40 mm	HB	--		
0.8 mm	HB	--		
1.5 mm	HB	--		
3.0 mm	HB	--		



# Ultramid® B3L

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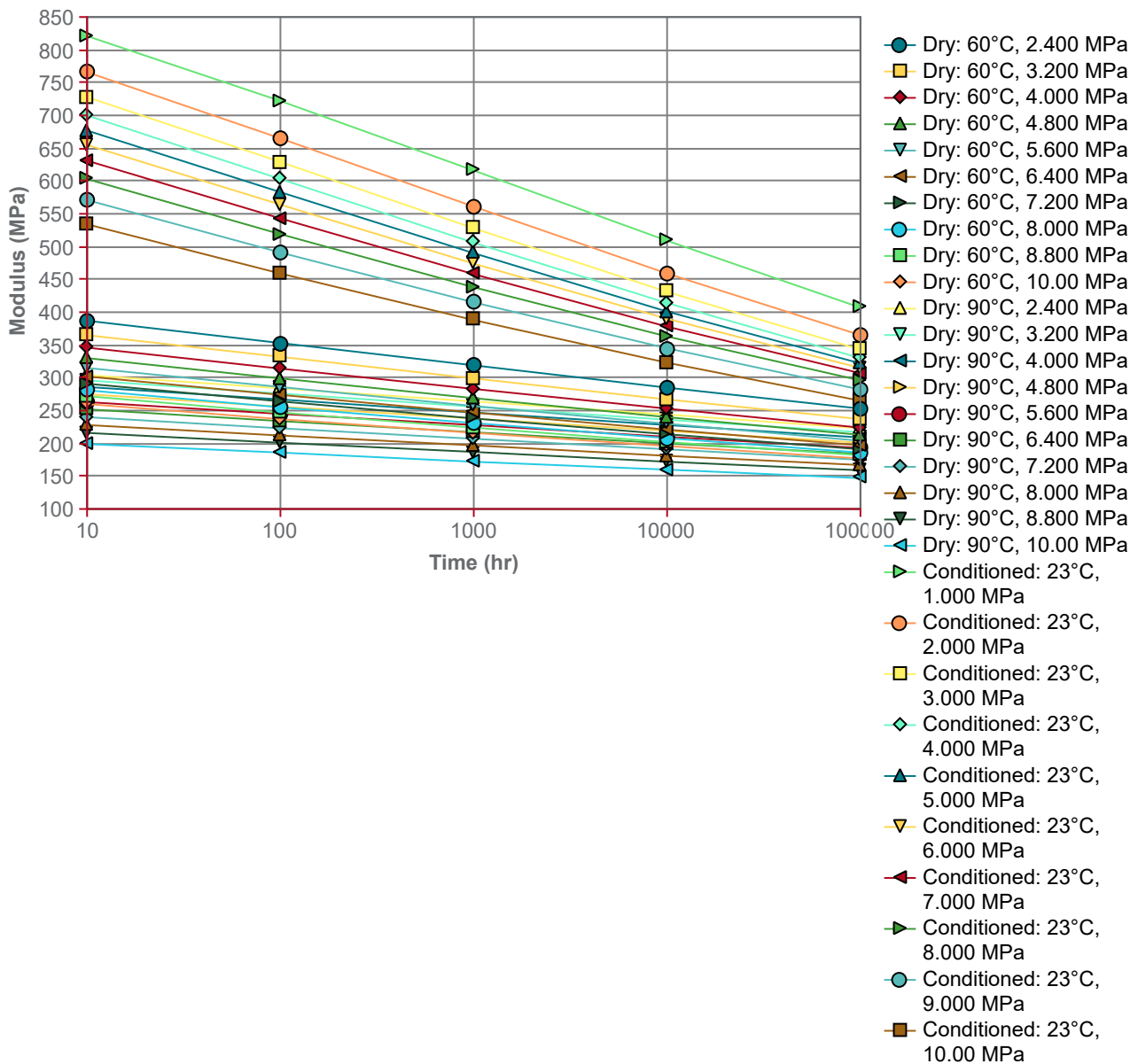
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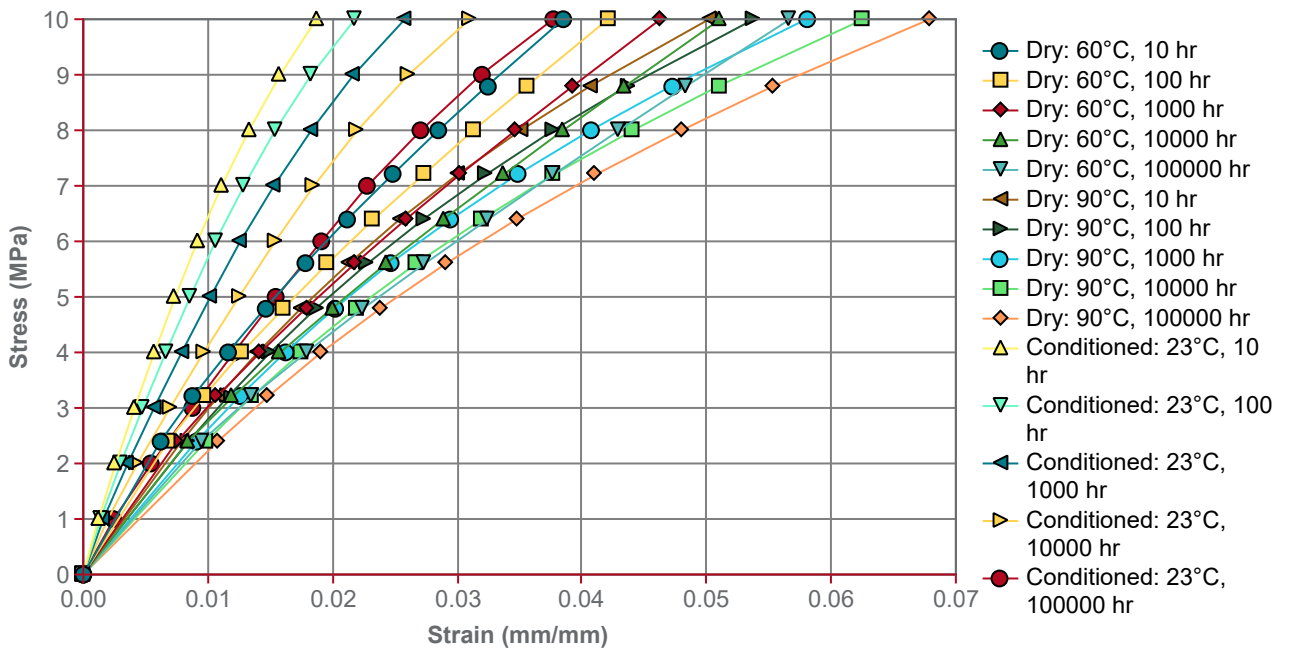
Injection	Dry Unit
Drying Temperature	80 °C
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	0.15 %
Processing (Melt) Temp	240 to 285 °C
Mold Temperature	65 to 80 °C
Injection Pressure	3.50 to 12.5 MPa
Injection Rate	Fast



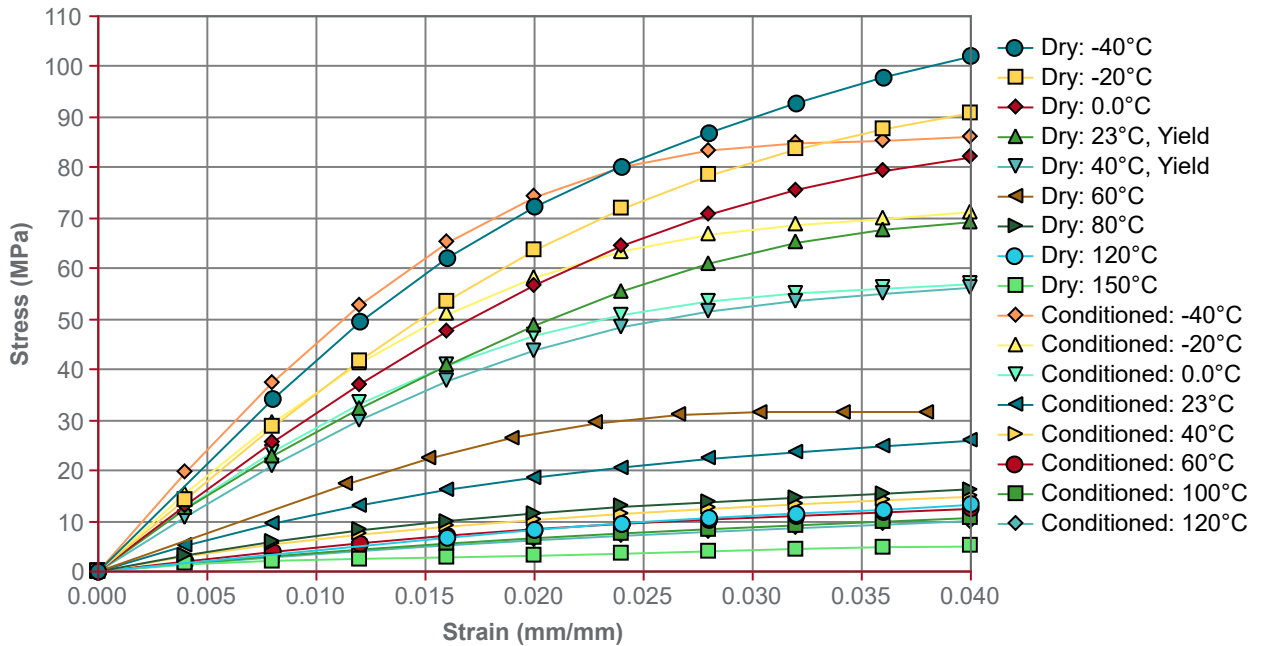
Creep Modulus vs. Time (ISO 11403-1)



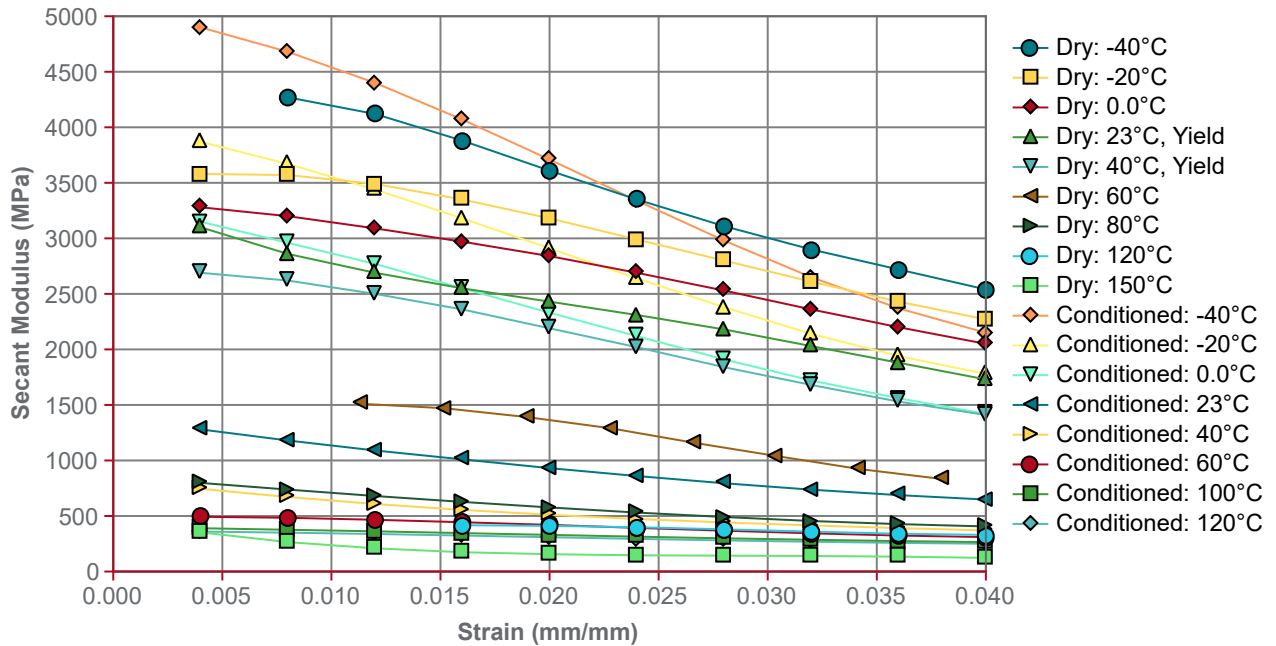
Isochronous Stress vs. Strain (ISO 11403-1)



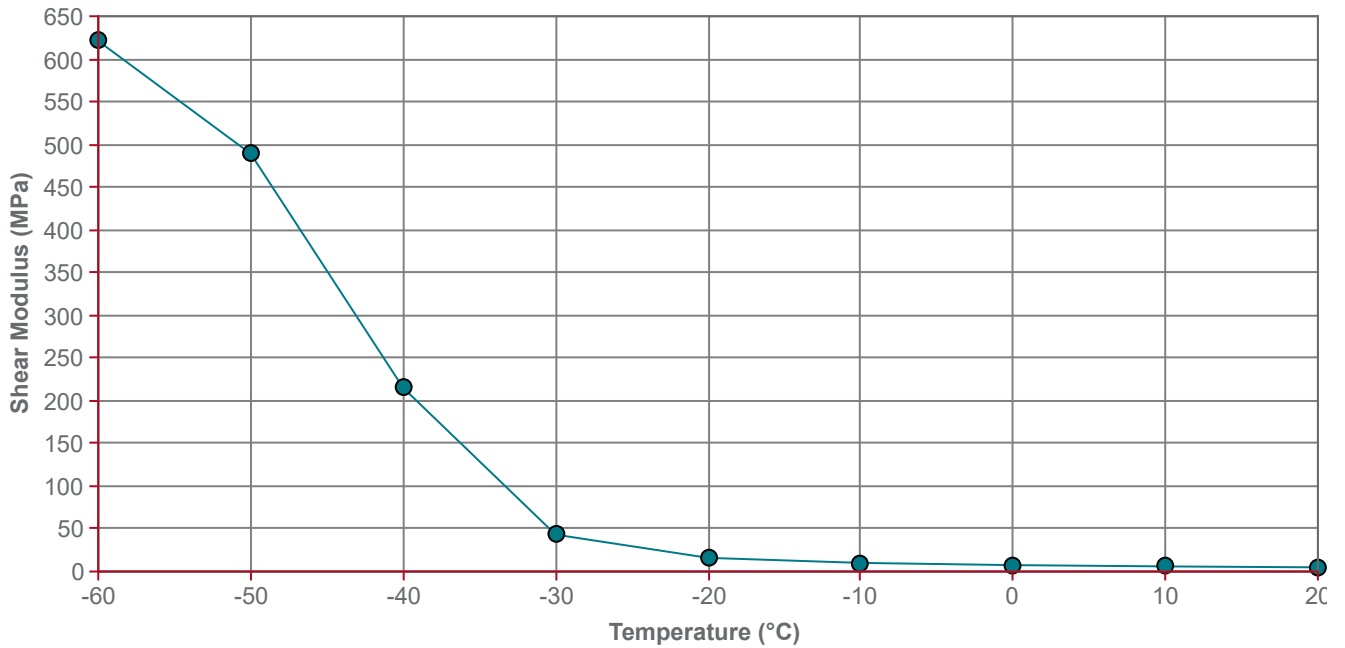
Isothermal Stress vs. Strain (ISO 11403-1)



Secant Modulus vs. Strain (ISO 11403-1)

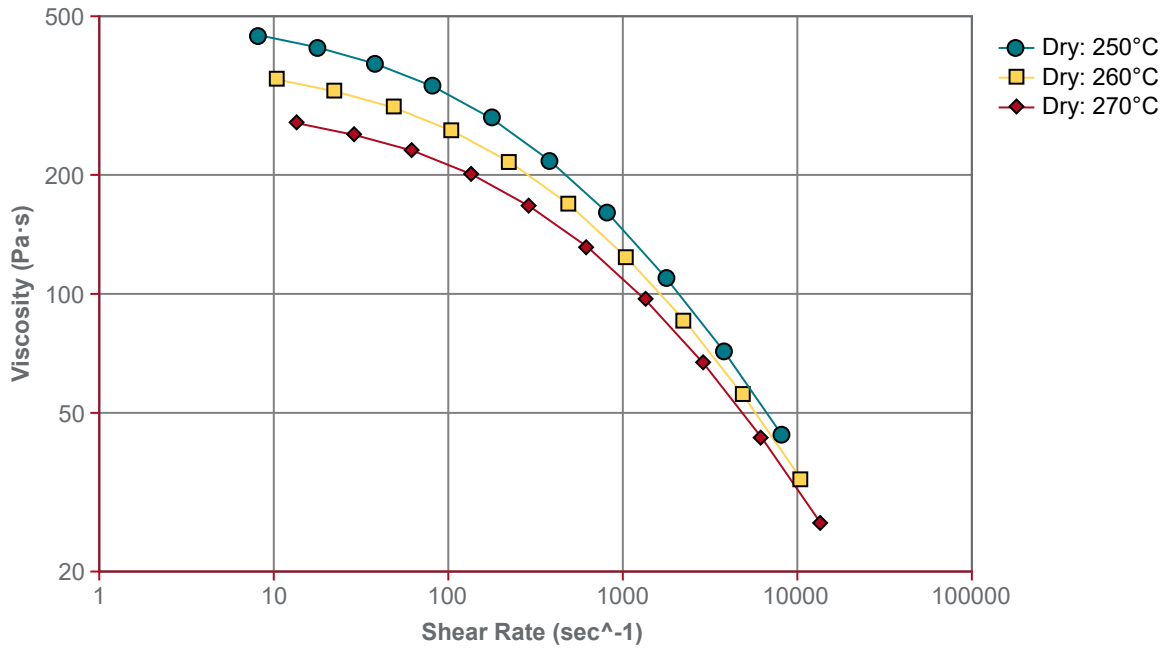


Shear Modulus vs. Temperature (ISO 11403-1)





Viscosity vs. Shear Rate (ISO 11403-2)



### Notes

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

<sup>3</sup> Typical properties: these are not to be construed as specifications.



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**Where to Buy**

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**Supplier****BASF Corporation**

Wyandotte, MI USA

Telephone: 800-545-8359

Web: <https://www.basf.com/us/en.html>

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**Distributor****ALBIS Plastic***ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.*

Telephone: +49-40-78105-0

Web: <http://www.albis.com/>

Availability: Algeria, Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, United Kingdom

**Amco Polymers**

Telephone: 800-262-6685

Web: <http://www.amcopolymers.com/>

Availability: North America

**Entec Polymers**

Telephone: 800-375-5440

Web: <http://www.entecpolymers.com/>

Availability: North America

**M. Holland Canada Company**

Telephone: 905-665-1168

Web: <http://www.mholland.com/>

Availability: Canada

**M. Holland Company**

Telephone: 855-497-1403

Web: <http://www.mholland.com/>

Availability: Mexico, United States

**Nexeo Plastics**

Telephone: 833-446-3936

Web: <https://www.nexeoplastics.com/>

Availability: North America

**Ultrapolymers***Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.*

Telephone: +32-11-57-95-57

Web: <http://www.ultrapolymers.com/>

Availability: Belgium, Bosnia and Herzegovina, Croatia, France, Ireland, Italy, Macedonia, Netherlands, Portugal, Serbia, Spain, Turkey, United Kingdom

