# Delrin® 500P NC010

ACETAL RESIN

# **DuPont Performance Polymers**

## **Technical Data**

Medium Viscosity Acetal Homopolyr	ner with Improved Processing			
General				
Material Status	Commercial: Active			
Literature <sup>1</sup>	<ul> <li>Processing - Injection Molding (English)</li> <li>Typical Processing for DuPont Engineering Polymers (English)</li> <li>White Paper - Property Advantages of Delrin® Acetal Homopolymer - a guide for design engineers (English)</li> </ul>			
UL Yellow Card <sup>2</sup>	• E41938-257616			
Search for UL Yellow Card	DuPont Performance Polyn     Delrin®	ners		
Availability	<ul><li> Africa &amp; Middle East</li><li> Asia Pacific</li></ul>	<ul><li>Europe</li><li>Latin America</li></ul>	North America	
Additive	Lubricant	<ul> <li>Mold Release</li> </ul>		
Features	<ul> <li>Good Processability</li> </ul>	<ul> <li>Homopolymer</li> </ul>	<ul> <li>Medium Viscosity</li> </ul>	
RoHS Compliance	Contact Manufacturer			
Automotive Specifications	<ul> <li>ASTM D6778 POM0113</li> <li>CHRYSLER MS-DB-100 CPN2203</li> </ul>	<ul><li>FORD WSK-M4D637-A2</li><li>GM GMP.POM.002</li></ul>	<ul><li>GM GMW19P-POM-H3R</li><li>IMDS ID 14075949</li></ul>	
Forms	Pellets			
Processing Method	Injection Molding			
Multi-Point Data	<ul> <li>Coefficient of Thermal Expansion vs. Temperature (ISO 11403-1)</li> <li>Creep Modulus vs. Time (ISO 11403-1)</li> <li>Isochronous Stress vs. Strain (ISO 11403-1)</li> <li>Isothermal Stress vs. Strain (ISO 11403-1)</li> <li>Secant Modulus vs. Strain (ISO 11403-1)</li> <li>Shear Modulus vs. Temperature (ISO 11403-1)</li> <li>Shear Modulus vs. Temperature, Dynamic (ISO 11403-1)</li> <li>Shear Stress vs. Shear Rate (ISO 11403-1)</li> <li>Specific Volume vs Temperature (ISO 11403-2)</li> <li>Tensile Modulus vs. Temperature (ISO 11403-1)</li> </ul>			
Part Marking Code (ISO 11469)	• POM			
Resin ID (ISO 1043)	• POM			

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.42 g/cm <sup>3</sup>	1.42 g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	15 g/10 min	15 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	13 cm <sup>3</sup> /10min	13 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.9 %	1.9 %	
Flow	2.0 %	2.0 %	
Water Absorption			ISO 62
Saturation, 73°F (23°C), 0.0787 in (2.00 mm)	1.3 %	1.3 %	
Equilibrium, 73°F (23°C), 0.0787 in (2.00 mm), 50% RH	0.20 %	0.20 %	

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ACETAL RESIN DuPont Performance Polymers



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Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	450000 psi	3100 MPa	ISO 527-2
Tensile Stress (Yield)	10300 psi	71.0 MPa	ISO 527-2
Tensile Strain (Yield)	17 %	17 %	ISO 527-2
Nominal Tensile Strain at Break	30 %	30 %	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	406000 psi	2800 MPa	
1000 hr	232000 psi	1600 MPa	
Flexural Modulus	435000 psi	3000 MPa	ISO 178
Flexural Stress (3.5% Strain)	11600 psi	80.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength	( 3 /		ISO 179/1eA
-22°F (-30°C)	3.8 ft·lb/in <sup>2</sup>	8.0 kJ/m²	
73°F (23°C)	4.3 ft·lb/in <sup>2</sup>	9.0 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	130 ft·lb/in <sup>2</sup>	280 kJ/m <sup>2</sup>	
73°F (23°C)	150 ft·lb/in <sup>2</sup>	320 kJ/m <sup>2</sup>	
Notched Izod Impact Strength		02010711	ISO 180/1A
-22°F (-30°C)	3.8 ft·lb/in²	8.0 k.l/m <sup>2</sup>	100 100, 17
73°F (23°C)	4.3 ft·lb/in <sup>2</sup>	9.0 k.1/m <sup>2</sup>	
Unnotched Izod Impact Strength	4.01(10)11	0.0 (0/11	ISO 180/111
-22°F (-30°C)	120 ft·lb/in <sup>2</sup>	250 k.l/m <sup>2</sup>	100/100/10
73°F (23°C)	130 ft·lb/in <sup>2</sup>	280 k.l/m²	
Multi-Axial Instrumented Impact Energy	1001(10)111	200 10/11	150 6603-2
73°F (23°C)	2 21 ft·lb	3.00.1	100 0000-2
101 (200)	2.2110	0.000	
Multi-Avial Instrumented Impact Peak Force			150 6603-2
Multi-Axial Instrumented Impact Peak Force	450 lbf	2000 N	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C)	450 lbf	2000 N Nominal Value (SI)	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness	450 lbf Nominal Value (English)	2000 N Nominal Value (SI)	ISO 6603-2 Test Method
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale	450 lbf Nominal Value (English)	2000 N Nominal Value (SI)	ISO 6603-2 Test Method ISO 2039-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale	450 lbf Nominal Value (English) 92 120	2000 N Nominal Value (SI) 92 120	ISO 6603-2 Test Method ISO 2039-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness	450 lbf Nominal Value (English) 92 120	2000 N Nominal Value (SI) 92 120	ISO 6603-2 Test Method ISO 2039-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30	450 lbf Nominal Value (English) 92 120 27800 psi	2000 N Nominal Value (SI) 92 120	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI)	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English)	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa 170 MPa Nominal Value (SI)	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa) Linannealed	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English) 320 °E	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI)	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa) Linannealed	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95 0 °C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F 230 °F 230 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A ISO 75-2/A
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Boll Procesure Text (320°E (165°C))	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F 230 °F 230 °F 230 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Page	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A ISO 306/B50 IEC 60695 10 2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C))	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F 230 °F 311 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 170 °C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A ISO 306/B50 IEC 60695-10-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup>	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F 230 °F 311 °F Pass 352 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A ISO 75-2/A ISO 306/B50 IEC 60695-10-2 ISO 11357-3 ISO 2022
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup> CLTE	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English) 320 °F 203 °F 230 °F 311 °F Pass 352 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A ISO 306/B50 IEC 60695-10-2 ISO 11357-3 ISO 11359-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup> CLTE Flow	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English) 320 °F 203 °F 230 °F 230 °F 311 °F Pass 352 °F 5.6E-5 in/in/°F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C 1.0E-4 cm/cm/°C	ISO 6603-2 Test Method ISO 2039-2 ISO 2039-1 Test Method ISO 75-2/B ISO 75-2/A ISO 75-2/A ISO 306/B50 IEC 60695-10-2 ISO 11357-3 ISO 11359-2
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Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup> CLTE Flow Flow : -40 to 73°F (-40 to 23°C) Transverse	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi 24700 psi Nominal Value (English) 320 °F 203 °F 230 °F 311 °F Pass 352 °F 5.6E-5 in/in/°F 5.0E-5 in/in/°F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C 1.0E-4 cm/cm/°C 9.0E-5 cm/cm/°C	ISO 6603-2         Test Method         ISO 2039-1         Test Method         ISO 75-2/B         ISO 75-2/A         ISO 75-2/A         ISO 306/B50         IEC 60695-10-2         ISO 11357-3         ISO 11359-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup> CLTE Flow Flow : -40 to 73°F (-40 to 23°C) Transverse Transverse : -40 to 73°F (-40 to 23°C)	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F 230 °F 311 °F Pass 352 °F 5.6E-5 in/in/°F 5.0E-5 in/in/°F 5.0E-5 in/in/°F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C 1.0E-4 cm/cm/°C 9.0E-5 cm/cm/°C 9.0E-5 cm/cm/°C	ISO 6603-2         Test Method         ISO 2039-1         Test Method         ISO 75-2/B         ISO 75-2/A         ISO 306/B50         IEC 60695-10-2         ISO 11357-3         ISO 11359-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup> CLTE Flow Flow : -40 to 73°F (-40 to 23°C) Transverse Transverse : -40 to 73°F (-40 to 23°C) Annealing Temperature	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F 230 °F 311 °F Pass 352 °F 5.6E-5 in/in/°F 5.0E-5 in/in/°F 5.0E-5 in/in/°F 5.0E-5 in/in/°F 320 °F	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C 1.0E-4 cm/cm/°C 9.0E-5 cm/cm/°C 9.0E-5 cm/cm/°C 9.0E-5 cm/cm/°C 1.0E-4 cm/cm/°C	ISO 6603-2         Test Method         ISO 2039-1         Test Method         ISO 75-2/B         ISO 75-2/A         ISO 306/B50         IEC 60695-10-2         ISO 11357-3         ISO 11359-2
Multi-Axial Instrumented Impact Peak Force 73°F (23°C) Hardness Rockwell Hardness M-Scale R-Scale Ball Indentation Hardness H 358/30 H 961/30 Thermal Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Unannealed 264 psi (1.8 MPa), Annealed Vicat Softening Temperature Ball Pressure Test (329°F (165°C)) Melting Temperature <sup>4</sup> CLTE Flow Flow : -40 to 73°F (-40 to 23°C) Transverse Transverse : -40 to 73°F (-40 to 23°C) Annealing Temperature Annealing Time - Optional	450 lbf Nominal Value (English) 92 120 27800 psi 24700 psi Nominal Value (English) 320 °F 203 °F 203 °F 230 °F 311 °F Pass 352 °F 5.6E-5 in/in/°F 5.0E-5 in/in/°F 5.0E-5 in/in/°F 5.0E-5 in/in/°F 320 °F 30.0 min/mm	2000 N Nominal Value (SI) 92 120 192 MPa 170 MPa Nominal Value (SI) 160 °C 95.0 °C 110 °C 155 °C Pass 178 °C 1.0E-4 cm/cm/°C 9.0E-5 cm/cm/°C 1.0E-4 cm/cm/°C 9.0E-5 cm/cm/°C 1.0E-5 cm/cm/°C 3.00 min/mm	ISO 6603-2         Test Method         ISO 2039-2         ISO 2039-1         Test Method         ISO 75-2/B         ISO 75-2/A         ISO 306/B50         IEC 60695-10-2         ISO 11357-3         ISO 11359-2

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## **Delrin® 500P NC010**

ACETAL RESIN

**DuPont Performance Polymers** 

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	4.0E+14 ohms	4.0E+14 ohms	IEC 62631-3-2
Volume Resistivity	2.0E+12 ohms m	2.0E+12 ohms m	IEC 62631-3-1
Electric Strength	1100 V/mil	44 kV/mm	IEC 60243-1
Relative Permittivity			IEC 62631-2-1
100 Hz	3.80	3.80	
1 MHz	3.80	3.80	
Dissipation Factor			IEC 62631-2-1
1 MHz	5.5E-3	5.5E-3	
100 Hz	9.0E-3	9.0E-3	
Comparative Tracking Index	600 V	600 V	IEC 60112
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate <sup>5</sup> (0.0394 in (1.00 mm))	0.79 in/min	20 mm/min	ISO 3795
Flame Rating			
0.031 in (0.8 mm)	HB	HB	UL 94
0.06 in (1.5 mm)	НВ	НВ	UL 94 IEC 60695-11-10, -20
0.03 in (0.8 mm)	НВ	HB	IEC 60695-11-10, -20
Oxygen Index	22 %	22 %	ISO 4589-2
FMVSS Flammability	В	В	FMVSS 302
Fogging			ISO 6452
F-value (refraction)	90 %	90 %	
G-value (condensate)	3.5E-4 g	3.5E-4 g	
Fill Analysis	Nominal Value (English)	Nominal Value (SI)	
Melt Density	1.19 g/cm <sup>3</sup>	1.19 g/cm <sup>3</sup>	
Thermal Conductivity of Melt	1.7 Btu·in/hr/ft²/°F	0.24 W/m/K	
Additional Information	Nominal Value (English)	Nominal Value (SI)	Test Method
Emission	< 8.00 mg/kg	< 8.00 mg/kg	VDA 275
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	176 °F	80 °C	
Drying Time - Desiccant Dryer	2.0 to 4.0 hr	2.0 to 4.0 hr	
Suggested Max Moisture	0.20 %	0.20 %	
Processing (Melt) Temp	410 to 428 °F	210 to 220 °C	
Melt Temperature, Optimum	419 °F	215 °C	
Mold Temperature	176 to 212 °F	80 to 100 °C	
Mold Temperature, Optimum	194 °F	90 °C	
Holding Pressure	11600 to 14500 psi	80.0 to 100 MPa	
Drying Recommended	yes	yes	
Hold Pressure Time	8.00 s/mm	8.00 s/mm	

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Coefficient of Thermal Expansion vs. Temperature (ISO 11403-1)







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Creep Modulus vs. Time (ISO 11403-1)





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Shear Modulus vs. Temperature, Dynamic (ISO 11403-1)





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Isochronous Stress vs. Strain (ISO 11403-1)





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Isothermal Stress vs. Strain (ISO 11403-1)





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Secant Modulus vs. Strain (ISO 11403-1)





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Shear Modulus vs. Temperature (ISO 11403-1)





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Shear Stress vs. Shear Rate (ISO 11403-1)





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Specific Volume vs Temperature (ISO 11403-2)





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Tensile Modulus vs. Temperature (ISO 11403-1)





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Viscosity vs. Shear Rate (ISO 11403-2)





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

<sup>4</sup> 10°C/min

<sup>5</sup> FMVSS 302

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