Technical Data Sheet



Radel[®] R-5500 polyphenylsulfone

Radel® R-5500 is a general purpose extrusion grade of polyphenylsulfone (PPSU), offering exceptional hydrolytic stability and better toughness than most commercially available high-temperature polymers. This resin has a high heat deflection temperature, excellent thermal stability, outstanding resistance to environmental stress cracking, good electrical properties and inherent flame retardant properties. Transparent and opaque colors are available.

Transparent Grades:

• Natural: Radel® R-5500 NT

Opaque Grades:

General

• Black: Radel® R-5500 BK937

- Bone: Radel® R-5500 NT15
- Grey: Radel® R-5500 GY1137
- Grey: Radel® R-5500 GY1037
- Grey: Radel® R-5500 GY874
- Red: Radel® R-5500 RD1018
- Orange: Radel® R-5500 OR1145
- Yellow: Radel® R-5500 YL1337
- Green: Radel® R-5500 GN1007
- Blue: Radel® R-5500 BU1027
- Blue: Radel® R-5500 BU391
- Violet: Radel® R-5500 VT2582
- Brown: Radel® R-5500 BN1164

Material Status	 Commercial: Active 		
Availability	Asia Pacific	Latin America	
	• Europe	 North America 	
	Acid Resistant	Heat Sterilizable	
	 Autoclave Sterilizable 	 High ESCR (Stress Crack Resist.) 	
	 Base Resistant 	 High Heat Resistance 	
	 Biocompatible 	 Hydrolytically Stable 	
Features	 Chemical Resistant 	 Radiation (Gamma) Resistant 	
reatures	 E-beam Sterilizable 	 Radiation Sterilizable 	
	 Ethylene Oxide Sterilizable 	 Radiotranslucent 	
	 Flame Retardant 	 Steam Resistant 	
	 Good Sterilizability 	 Steam Sterilizable 	
	 Good Thermal Stability 	 Ultra High Toughness 	
	Aerospace Applications		
	 Aircraft Applications 	Medical Devices Medical (Healthcare Applications	
Uses	 Dental Applications 	 Medical/Healthcare Applications Membranes 	
	 Food Service Applications 	MemoralesSurgical Instruments	
	 Hospital Goods 		
Agency Ratings	• ISO 10993		
RoHS Compliance	RoHS Compliant		
Automotive Specifications	• ASTM D6394 SP0311		
Appearance	• Black	Colors Available	
	 Clear/Transparent 		
Forms	Pellets		
Processing Method	Blow Molding	Machining	
	 Extrusion 	 Profile Extrusion 	
	 Film Extrusion 	 Sheet Extrusion 	
	 Injection Molding 	 Thermoforming 	

Radel[®] R-5500 polyphenylsulfone

Density / Specific Gravity 1.29 ASTM D782 Melt Mass-Flow Rate (MFR) (865°C/5.0 kg) 12 to 17 g/10 min ASTM D782 Moling Shrinkage - Flow (3.18 mm) 0.70 % ASTM D955 Water Absorption ASTM D782 ASTM D955 Z4 hr 0.37 % Equilibrum 1.1 % Mechanical Typical Value Unit Test method Tensile Modulus (3.18 mm) 63.6 MPa ASTM D638 Tensile Strongth (3.18 nm) 63.6 MPa ASTM D638 Tensile Strongth (3.18 nm) 60.10 120 % Flexural Modulus (3.18 mm) 91.0 MPa Plexural Modulus (3.18 nm) 91.0 MPa ASTM D638 Tigled Value Unit Test method Impact Typical Value Unit Test method Nothed Izod Impact (3.18 mm) 91.0 MPa ASTM D780 Impact Typical Value Unit Test method Nothed Izod Impact (3.18 mm) 690 J/m ASTM D1820 Impact Typical Value Unit Test method Nothed Izod Impact (3.18 mm) 690 J/m ASTM D1820 Impact Typical Value Unit Test method Nothed Izod Impact (3.18 mm) <th>Physical</th> <th>Typical Value</th> <th>Unit</th> <th>Test method</th>	Physical	Typical Value	Unit	Test method
Met Mass-Flow Rate (MFR) (365°C/5.0 kg) 12 to 17 g/10 min ASTM D1238 Molding Strinkage - Flow (3.18 mm) 0.70 % ASTM D550 24 hr 0.37 % Equilibrium 1.1 % Mechanical Typical Value Unit Test method Tonelle Modulus (3.18 mm) 234.0 MPa ASTM D570 Z4 hr 0.37 % Equilibrium Typical Value Unit Test method Tonelle Modulus (3.18 mm) 234.0 MPa ASTM D538 Tensile Strength (3.18 mm) 69.6 MPa ASTM D538 Tonsile Kodulus (3.18 mm) 69.0 L0 120 % Exact Modulus (3.18 mm) 91.0 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.18 mm) 91.0 MPa ASTM D790 Flexural Strength (3.18 mm) 91.0 MPa ASTM D1926 Tonead Typical Value Unit Test method MasTM D1822 Themal Notched Lood Impact (3.18 mm) 99 kU/m² ASTM D1822 Themal Typical Value Unit Test method Deflection Temperature Under Load Tonelload Value Unit Test method ASTM D1822 Themal Typical Value Unit Test method AST				
Water Absorption ASTM D570 24 hr 0.37 % Equilibrium 1.1 % Mechanical Tipical Value Unit Tensile Modulus (3.18 mm) 2340 MPa ASTM D538 Strength (3.18 mm) Breakie Strength (3.18 mm) 69.6 MPa Veld, 3.18 mm 7.2 % Breakie, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa Breakie, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa Breakie, 3.18 mm 60 to 120 % Flexural Strength (5.0% Strain, 3.18 mm) 91.0 MPa ASTM D790 East method Notched Izod Impact (3.18 mm) 690 J/m Equilibrium 10 MPa ASTM D790 690 J/m Deflection Temperature Under Load ASTM D790 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 200 K/Vmm 3.6 mm 0.0254 mm		12 to 17	g/10 min	ASTM D1238
24 hr 0.37 % Equilibrium 1.1 % Mechanical Typical Value Unit Test method Tensile Kinoght (3.18 mm) 2340 MPa ASTM D638 Tensile Elongation ASTM D638 Tensile Elongation ASTM D638 Tensile Elongation 7.2 % Testes (3.18 mm) Beak, 3.18 mm Boto 120 % Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Flexural Modulus (3.18 mm) 91.0 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.16 mm) 91.0 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.16 mm) 91.0 MPa ASTM D790 Insale Impact Strength (3.18 mm) 69.0 J/m ASTM D1825 Tensile Impact Strength (3.18 mm) 69.0 J/m ASTM D1825 Thermal Typical Value Unit Test method D8.1/m² ASTM D1825 Class Transition Temperature Under Load 207 °C ASTM D1826 CLTE - Flow (3.18 mm) 5.6E-5 cm/cm/°C ASTM D1826 Class Transition Temperature 10.0 Yr C ASTM D1826 CLTE - Flow (3.18 mm) 5.00 KV/mm 3.18 mm D120 KV/mm D140 KD14 D140 K			-	ASTM D955
Equilibrium 1.1 % Mechanical Typical Value Unit Test method Tensile Modulus (3, 18 mm) 2340 MPa ASTM D638 Tensile Extength (3.18 mm) 69.6 MPa ASTM D638 Yield, 3, 18 mm 7.2 % Break, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Flexural Modulus (3.18 mm) 91.0 MPa ASTM D790 Inpact Typical Value Unit Test method Notched Izod Impact (3.18 mm) 690 J/m ASTM D782 Thermal Typical Value Unit Test method Natched Izod Impact (3.18 mm) 399 kJ/m² ASTM D782 Thermal Typical Value Unit Test method Deflection Temperature Under Load ASTM D782 ASTM D688 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D782 Electrical Typical Value Unit Test method ASTM D595 Uniter Strength 9.0E+15 onms-cm ASTM D595 <td< td=""><td>Water Absorption</td><td></td><td></td><td>ASTM D570</td></td<>	Water Absorption			ASTM D570
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Tensile Modulus (3.18 mm) 2340 MPa ASTM D638 Tensile Strength (3.18 mm) 60.6 MPa ASTM D638 Tensile Elongation 7.2 % Break, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.18 mm) 91.0 MPa ASTM D790 Impact Typical Value Unit Test method Notched Lood Impact (3.18 mm) 90.0 MPa ASTM D256 Tensile Impact Strength (3.18 mm) 90.0 J/m ASTM D256 Tensile Impact Lood Impact (3.18 mm) 90.0 J/m ASTM D256 Tensile Impact U Test method D80 J/m ASTM D1822 Thermal Typical Value Unit Test method D6162 Deflection Temperature Under Load 207 °C ASTM D1825 CLTE - Flow (3.18 mm) 5.6E-5 cm/cm/°C ASTM D1806 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D149 0.0254 mm > 2000 kV/mm 3.18 mm 3.18 mm 15 KV/mm Dielectric Constant (3.18 mm, 60 Hz)	Equilibrium	1.1	%	
Tensile Strength (3.18 mm) 69.6 MPa ASTM D638 Tensile Elongation ASTM D638 Yield, 3.18 mm 7.2 % Break, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.18 mm) 91.0 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.18 mm) 91.0 MPa ASTM D790 Impact Typical Value Unit Test method Notched Izod Impact (3.18 mm) 91.0 MPa ASTM D280 Inspact Typical Value Unit Test method D80 J/m ASTM D1822 Themal Typical Value Unit Test method D80 J/m ASTM D548 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D265 Dielectrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D267 Dielectrical Typical Value Unit Test method LET - Flow (3.18 mm) Strum D149 0.0254 nm 3.200 kV/mm 3.18 mD <t< td=""><td>Mechanical</td><td>Typical Value</td><td>Unit</td><td>Test method</td></t<>	Mechanical	Typical Value	Unit	Test method
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Yield, 3.18 mm 7.2 % Break, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Inpact Typical Value Unit Test method Impact Typical Value Unit Test method Notched Izod Impact (3.18 mm) 690 J/m ASTM D266 Tensile Impact Strength (3.18 mm) 399 kJ/m² ASTM D1822 Thermal Typical Value Unit Test method Deflection Temperature Under Load ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 9.0E+15 ohms cm ASTM D648 1.8 MPa, Unannealed, 3.18 mm 200 °C ASTM D150 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms cm ASTM D150 Flammability 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flammability	Tensile Strength (3.18 mm)	69.6	MPa	ASTM D638
Break, 3.18 mm 60 to 120 % Flexural Modulus (3.18 mm) 2410 MPa ASTM D790 Flexural Strength (5.0% Strain, 3.18 mm) 91.0 MPa ASTM D790 Impact Typical Value Unit Test method Notched Izod Impact (3.18 mm) 690 J/m ASTM D256 Tensile Impact Strength (3.18 mm) 399 kJ/m² ASTM D1822 Thermal Typical Value Unit Test method Deflection Temperature Under Load ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D648 1.8 MD468 1.8 MPa, Unannealed, 3.18 mm 207 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 200 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 200 °C ASTM D648 1.8 MPa, Unannealed, 3.18 mm 5.6E-5 cm/cm/°C ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D150 Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method	Tensile Elongation			ASTM D638
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Tensile Impact Strength (3.18 mm) 399 kJ/m² ASTM D1822 Thermal Typical Value Unit Test method Deflection Temperature Under Load ASTM D648 ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM D648 Glass Transition Temperature 220 °C ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm > 200 kV/mm 3.44 ASTM D150 Flammability Typical Value Unit Test method Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flame Rating 1 (0.76 mm) V-0 UL 94 Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Steam Sterilization - w/ Morpholine ² > 1000 Cycles	Impact	Typical Value	Unit	
Thermal Typical Value Unit Test method Deflection Temperature Under Load ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM E1356 CLTE - Flow (3.18 mm) 5.6E-5 cm/cm/°C ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm 0.0254 mm > 200 kV/mm 3.18 mm 3.18 mm 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 Plane Rating 1 (0.76 mm) V-0 UL 94 Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Processing (Meth) Tempe 149 °C Dprying Time Drying Time 2.5 hr Processing (Meth) Temp 360 to 391 °C Mold Temperature 138 to 163 °C Mold Temperature 138 to 163 °C	Notched Izod Impact (3.18 mm)	690	J/m	ASTM D256
Deflection Temperature Under Load ASTM D648 1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM E1356 CLTE - Flow (3.18 mm) 5.6E-5 cm/cm/°C ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm 0.0254 mm > 200 kV/mm 3.18 mm 3.18 mm 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flame Rating 1 (0.76 mm) V-0 UL 94 Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Steam Sterilization - w/ Morpholine 2 > 1000 Cycles Injection Typical Value Unit Test method Drying Temperature 149 °C D Drying Time 2.5 hr Processing (Melt) Temp 360 to 391 °C	Tensile Impact Strength (3.18 mm)	399	kJ/m ²	ASTM D1822
1.8 MPa, Unannealed, 3.18 mm 207 °C Glass Transition Temperature 220 °C ASTM E1356 CLTE - Flow (3.18 mm) 5.6E-5 cm/cm/°C ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms•cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm 0.0254 mm > 200 kV/mm 3.18 mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flammability Typical Value Unit Test method Flame Rating ¹ (0.76 mm) V-0 UL 94 Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Injection Typical Value Unit Test method Diving Temperature	Thermal	Typical Value	Unit	Test method
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CLTE - Flow (3.18 mm) 5.6E-5 cm/cm/°C ASTM D696 Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm 3.41 0.0254 mm > 200 kV/mm 3.18 mm 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flammability Typical Value Unit Test method Potical Typical Value Unit Test method Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Injection Typical Value Unit Test method Injection Typical Value Unit Test method Injection Typical Value Unit Test method Drying Time 2.5 hr Typical Value Unit Processing (Melt) Temp 360 to 391 °C	1.8 MPa, Unannealed, 3.18 mm	207	°C	
Electrical Typical Value Unit Test method Volume Resistivity 9.0E+15 ohms-cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm > 200 kV/mm 3.18 mm 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Refractive Index 1.672 Additional Information Typical Value Unit Steam Sterilization - w/ Morpholine 2 > 1000 Cycles Injection Typical Value Unit Drying Time 2.5 hr Processing (Melt) Temp 360 to 391 °C Mold Temperature 138 to 163 °C	Glass Transition Temperature	220	°C	ASTM E1356
Volume Resistivity 9.0E+15 ohms·cm ASTM D257 Dielectric Strength ASTM D149 0.0254 mm > 200 kV/mm 3.18 mm 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flammability Typical Value Unit Test method Flame Rating ¹ (0.76 mm) V-0 UL 94 Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Steam Sterilization - w/ Morpholine ² > 1000 Cycles 1 Injection Typical Value Unit Typical Value Unit Drying Temperature 149 °C 0 Drying Time 2.5 hr Processing (Melt) Temp 360 to 391 °C Mold Temperature 138 to 163 °C 138 to 163 °C	CLTE - Flow (3.18 mm)	5.6E-5	cm/cm/°C	ASTM D696
Dielectric Strength ASTM D149 0.0254 mm > 200 kV/mm 3.18 mm 15 kV/mm Dielectric Constant (3.18 mm, 60 Hz) 3.44 ASTM D150 Flammability Typical Value Unit Test method Flame Rating 1 (0.76 mm) V-0 UL 94 Optical Typical Value Unit Test method Refractive Index 1.672 ASTM D542 Additional Information Typical Value Unit Test method Steam Sterilization - w/ Morpholine 2 > 1000 Cycles Injection Injection Typical Value Unit Typical Value Unit Drying Temperature 149 °C Drying Time Processing (Melt) Temp 360 to 391 °C Mold Temperature Mold Temperature 138 to 163 °C Mold Temperature	Electrical	Typical Value	Unit	Test method
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3.18 mm15 kV/mmDielectric Constant (3.18 mm, 60 Hz)3.44ASTM D150FlammabilityTypical Value UnitTest methodFlame Rating 1 (0.76 mm)V-0UL 94OpticalTypical Value UnitTest methodRefractive Index1.672ASTM D542Additional InformationTypical Value UnitSteam Sterilization - w/ Morpholine 2> 1000Cycles149 °CDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Dielectric Strength			ASTM D149
Dielectric Constant (3.18 mm, 60 Hz)3.44ASTM D150FlammabilityTypical Value UnitTest methodFlame Rating 1 (0.76 mm)V-0UL 94OpticalTypical Value UnitTest methodRefractive Index1.672ASTM D542Additional InformationTypical Value UnitSteam Sterilization - w/ Morpholine 2> 1000Cycles149 °CDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	0.0254 mm	> 200	kV/mm	
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Flame Rating 1 (0.76 mm)V-0UL 94OpticalTypical Value UnitTest methodRefractive Index1.672ASTM D542Additional InformationTypical Value UnitSteam Sterilization - w/ Morpholine 2> 1000 CyclesInjectionTypical Value UnitDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Dielectric Constant (3.18 mm, 60 Hz)	3.44		ASTM D150
OpticalTypical Value UnitTest methodRefractive Index1.672ASTM D542Additional InformationTypical Value UnitSteam Sterilization - w/ Morpholine 2> 1000 CyclesInjectionTypical Value UnitDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C			Unit	Test method
Refractive Index1.672ASTM D542Additional InformationTypical Value UnitSteam Sterilization - w/ Morpholine 2> 1000 CyclesInjectionTypical Value UnitDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Flame Rating ¹ (0.76 mm)	V-0		UL 94
Additional InformationTypical Value UnitSteam Sterilization - w/ Morpholine 2> 1000 CyclesInjectionTypical Value UnitDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Optical	Typical Value	Unit	Test method
Steam Sterilization - w/ Morpholine 2 > 1000 Cycles Injection Typical Value Unit Drying Temperature 149 °C Drying Time 2.5 hr Processing (Melt) Temp 360 to 391 °C Mold Temperature 138 to 163 °C	Refractive Index	1.672		ASTM D542
InjectionTypical Value UnitDrying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Additional Information	Typical Value	Unit	
Drying Temperature149 °CDrying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Steam Sterilization - w/ Morpholine ²	> 1000	Cycles	
Drying Time2.5 hrProcessing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Injection	Typical Value	Unit	
Processing (Melt) Temp360 to 391 °CMold Temperature138 to 163 °C	Drying Temperature	149	°C	
Mold Temperature 138 to 163 °C	Drying Time	2.5	hr	
·	Processing (Melt) Temp	360 to 391	°C	
Screw Compression Ratio 2.2:1.0	Mold Temperature	138 to 163	°C	
	Screw Compression Ratio	2.2:1.0		

Radel[®] R-5500 polyphenylsulfone

Extrusion	Typical Value Unit	
Drying Temperature	171 °C	
Drying Time	4.0 hr	
Cylinder Zone 1 Temp.	338 to 388 °C	
Cylinder Zone 2 Temp.	338 to 388 °C	
Cylinder Zone 3 Temp.	338 to 388 °C	
Cylinder Zone 4 Temp.	338 to 388 °C	
Cylinder Zone 5 Temp.	338 to 388 °C	
Adapter Temperature	327 to 371 °C	
Melt Temperature	343 to 399 °C	
Die Temperature	327 to 371 °C	

Notes

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

¹ These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

² Cycles passed without cracking, crazing, or rupture.

Steam Autoclave Conditions:

- Temperature: 270°F (132°C)
- Time: 30 minutes/cycle
- Steam Pressure: 27 psig (0.19 MPa)
- Stress Level: 1000 psi (7.0 MPa) in flexure
- Additive: Morpholine at 50 ppm

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