Product Information

DuPont™ Sorona® EP thermoplastic polymers contain between 20% and 37% renewably sourced material (by weight) derived from corn. The new material exhibits performance and molding characteristics similar to high-performance PBT (polybutylene terephthalate).

In addition to good strength and stiffness, early tests indicate improved surface appearance, lower warpage, and good dimensional stability, making it very attractive in a range of uses for automotive parts and components, electrical and electronics systems as well as industrial and consumer products.

Sorona® EP thermoplastic polymer starts with the same basic polymer chemistry as Sorona® polymer used for fibers but through proprietary formulation technology, further enhancements are added to create high-performance resins suitable for engineering plastics applications.

Sorona® 3015G NC010 is a 15% glass reinforced PTT resin containing 31% renewably sourced ingredients by weight (37% based on polymer only) with good strength, stiffness and low warpage and superior surface appearance in ambient temperature conditions.

Resin Identification	General information	Value	Unit	Test Standard
Reclogical properties Value Unit Test Standard	Resin Identification	PTT-GF15	-	ISO 1043
Melt volume-flow rate 13 cm²/10min ISO 1133 Temperature 250 °C ISO 1133 Load 2.16 kg ISO 1133 Moulding shrinkage, parallel 0.2 % ISO 294-4, 2577 Moulding shrinkage, normal 0.7 % ISO 294-4, 2577 Moulding shrinkage, normal 0.7 % ISO 294-4, 2577 Mechanical properties Value Unit Test Standard Tensile Modulus 0500 MPa ISO 527-1/-2 Stress at break 125 MPa ISO 527-1/-2 Stress at break 3 % ISO 527-1/-2 Strain at break 3 % ISO 527-1/-2 Flexural Modulus 5800 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Poisson's ratio 0.35 - ISO 527-1/-2 Charpy impact strength ISO 179/1eU 23 °C 30 kJ/m² 30 °C 30 kJ/m² 30 °C 5.5 kJ/m² -30 °C 5.5 kJ/m² -30 °C 6 kJ/m² Thermal properties Value Unit Test Standard Melting temperature, 10 °C/min 227 °C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 223 °C Coeff. of linear therm. expansion ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 Rormal, -40-23 °C 34 E-6/K Parallel, -40-23 °C 34 E-6/K Parallel, -51-160 °C 132 E-6/K Parallel, -51-160 °C 132 E-6/K RTI, electrical UL 746B O.75mm 50 °C Coeff. Iso 11359-1/-2 Coeff. Iso 11359-1/-2 Coeff. Iso 11359-1/-2 Coeff. Iso 11359-1/-2 RTI, electrical UL 746B O.75mm 50 °C Coeff. Iso 1159-1/-2 O.75mm 50 °C	Part Marking Code	>PTT-GF15<	-	
Temperature	Rheological properties	Value	Unit	Test Standard
Load Section Load	Melt volume-flow rate	13	cm ³ /10min	ISO 1133
Moulding shrinkage, parallel 0.2 % ISO 294-4, 2577 Moulding shrinkage, normal 0.7 % ISO 294-4, 2577 Mechanical properties Value Unit Test Standard Tensile Modulus 6500 MPa ISO 527-1/-2 Stress at break 125 MPa ISO 527-1/-2 Strain at break 3 % ISO 527-1/-2 Flexural Modulus 5800 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Poisson's ratio 0.35 - ISO 527-1/-2 Charpy impact strength 3 kJ/m² 23 °C 30 °C KJ/m² 30 °C 30 kJ/m² ISO 179/1eU 23 °C 5.5 kJ/m² ISO 179/1eA 23 °C 6 kJ/m² ISO 179/1eA Thermal properties Value Unit Test Standard Melting temperature, 10 °C/min 227 °C ISO 11357-1/-3 Temp, of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 200 °C	Temperature	250	°C	ISO 1133
Moulding shrinkage, normal 0.7 % ISO 294-4, 2577 Mechanical properties Value Unit Test Standard Tensile Modulus 6500 MPa ISO 527-1/-2 Stress at break 125 MPa ISO 527-1/-2 Strain at break 3 % ISO 527-1/-2 Strain at break 3 % ISO 527-1/-2 Strain at break 190 MPa ISO 178 Flexural Modulus 190 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Poisson's ratio 0.35 - ISO 527-1/-2 Charpy impact strength ISO 179/1eU 23° C 30 kJ/m² -30° C 30 kJ/m² Charpy notched impact strength ISO 179/1eA 23° C 5.5 kJ/m² -30° C 5.5 kJ/m² -30° C 5.5 kJ/m² Thermal properties Value Unit Test Standard Melting temperature, 10° C/min 227 ° C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 ° C 0.45 MPa 223 ° C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 Normal, -40-23° C 74 E-6/K Normal, 55-160° C 132 E-6/K Parallel, -40-23° C 34 E-6/K Parallel, -55-160° C 22 E-6/K RTI, electrical UL 7468 O.75mm 50 ° C ISO 11359-17-2 UL 7468 IUL 7468 O.75mm 50 ° C ISO 11359-17-2 UL 7468 IUL 7468 O.75mm 50 ° C ISO 11359-17-2 O.75mm 50 ° C ISO 11359-17-2 UL 7468 O.75mm 50 ° C ISO 11359-17-2 UL 7468 IUL 7468 O.75mm 50 ° C ISO 11359-17-2 O.75mm 50 ° C ISO 11359-17-2 O.75mm 50 ° C ISO 11359-17-2 ISO 178 ISO 178 ISO 29-11-2 ISO 39-11-2 ISO 39-11-2 ISO 39-11-2 ISO 39-11-2 ISO 39-11-2 ISO 39-11-2 ISO 39-11-2	Load	2.16	kg	ISO 1133
Mechanical properties Value Unit Test Standard	Moulding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Tensile Modulus 6500 MPa ISO 527-1/-2 Stress at break 125 MPa ISO 527-1/-2 Strain at break 3 % ISO 527-1/-2 Flexural break 5800 MPa ISO 178 Flexural Modulus 5800 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Poisson's ratio 0.35 - ISO 527-1/-2 Charpy impact strength ISO 179/1eU 23 °C 30 kJ/m² -30 °C 30 kJ/m² Charpy notched impact strength ISO 179/1eA 23 °C 5.5 kJ/m² -30 °C 6 kJ/m² Thermal properties Value Unit Melting temperature, 10 °C/min 227 °C Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion normal 89 E-6/K Normal, 55-160°C 132 E-6/K Normal, 55-160°C 132 E-6/K Parallel, 40-23 °C 42 E-6/K Parallel, -50	Moulding shrinkage, normal	0.7	%	ISO 294-4, 2577
Stress at break 125 MPa ISO 527-1/-2 Strain at break 3 % ISO 527-1/-2 Flexural Modulus 5800 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Poisson's ratio 0.35 - ISO 527-1/-2 Charpy impact strength ISO 179/1eU ISO 179/1eU 23°C 30 kJ/m² Charpy notched impact strength ISO 179/1eA 23°C 5.5 kJ/m² Charpy notched impact strength ISO 179/1eA 23°C 5.5 kJ/m² Thermal properties Value Unit Test Standard Melting temperature, 10°C/min 227 °C ISO 11357-17-3 Temp. of deflection under load ISO 75-11/-2 ISO 75-11/-2 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-11/-2 Coeff. of linear therm. expansion ISO 11359-11/-2 Normal, 40-23°C 74 E-6/K	Mechanical properties	Value	Unit	Test Standard
Strain at break 3 % ISO 527-1/-2 Flexural Modulus 5800 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Flexural Strength 190 MPa ISO 178 Flexural Strength 180 527-1/-2 Charpy impact strength ISO 179/1eU 23 °C 30 kJ/m² Charpy notched impact strength ISO 179/1eA 23 °C 5.5 kJ/m² Charpy notched impact strength ISO 179/1eA 23 °C 5.5 kJ/m² Charpy notched impact strength ISO 179/1eA 23 °C 5.5 kJ/m² Charpy notched impact strength ISO 179/1eA 23 °C ISO 11357-1/-3 Termal properties Value Unit Test Standard Melting temperature, 10 °C/min 227 °C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion 89 E-6/K Normal, -40-23 °C 74 E-6/K Normal, -40-23 °C 132 E-6/K Parallel, -40-23 °C 22 E-6/K Parallel, -50-160 °C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C UL 746B 0.75mm 50 °C U. 746B 1.5mm	Tensile Modulus	6500	MPa	ISO 527-1/-2
Flexural Modulus	Stress at break	125	MPa	ISO 527-1/-2
Flexural Strength 190 MPa ISO 178	Strain at break	3	%	ISO 527-1/-2
Poisson's ratio 0.35 - ISO 527-1/-2 Charpy impact strength ISO 179/1eU 23°C 30 kJ/m² -30°C 30 kJ/m² Charpy notched impact strength ISO 179/1eA 23°C 5.5 kJ/m² -30°C 6 kJ/m² Thermal properties Melting temperature, 10°C/min 227 °C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 5.6/K 0.45 MPa 223 °C 5.6/K Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K NOrmal, -40-23°C 74 E-6/K Normal, -55-160°C 132 E-6/K F-6/K Parallel, -40-23°C 34 E-6/K UL 746B 0.75mm 50 °C UL 746B 0.75mm 50 °C C	Flexural Modulus	5800	MPa	ISO 178
Charpy impact strength ISO 179/1eU 23 ° C 30 kJ/m² -30 ° C 30 kJ/m² Charpy notched impact strength ISO 179/1eA 23 ° C 5.5 kJ/m² -30 ° C 6 kJ/m² Thermal properties Walue Unit Test Standard Melting temperature, 10 ° C/min 227 ° C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 ° C C 0.45 MPa 223 ° C C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K ISO 11359-1/-2 Normal, -40-23 ° C 74 E-6/K Normal, 55-160 ° C Parallel, -40-23 ° C 34 E-6/K UL 746B 0.75mm 50 ° C UL 746B 0.75mm 50 ° C C	Flexural Strength	190	MPa	ISO 178
23°C 30 kJ/m² 30 kJ/m² 30 kJ/m² 30 kJ/m² 30 kJ/m² 30°C 30 kJ/m² 30°C 5.5 kJ/m² 30°C 6 kJ/m² 30°C	Poisson's ratio	0.35	-	ISO 527-1/-2
-30°C Charpy notched impact strength 23°C -30°C 5.5 kJ/m² -30°C 6 kJ/m² Thermal properties Value Unit Test Standard Melting temperature, 10°C/min 227 °C 180 H357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel Coeff. of linear therm. expansion normal 89 E-6/K Normal, -40-23°C Normal, 55-160°C Parallel, -40-23°C RTI, electrical 0.75mm 50 °C 1.5mm ISO 179/1eA ISO 179/1eA ISO 179/1eA ISO 1357-1/-2 ISO 11357-1/-3 ISO 11357-1/-2 ISO 11359-1/-2 UL 746B	Charpy impact strength			ISO 179/1eU
Charpy notched impact strength ISO 179/1eA 23 ° C 5.5 kJ/m² -30 ° C 6 kJ/m² Thermal properties Value Unit Test Standard Melting temperature, 10 ° C/min 227 ° C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 ° C 0.45 MPa 223 ° C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K Normal, -40-23 ° C 74 E-6/K Parallel, 40-23 ° C 34 E-6/K Parallel, 55-160 ° C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 ° C 1.5mm 50 ° C	23°C	30	kJ/m²	
23°C 5.5 kJ/m² 6 kJ/m²	-30°C	30	kJ/m²	
-30°C Thermal properties Walue Welting temperature, 10°C/min Temp. of deflection under load 150 75-1/-2 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel Coeff. of linear therm. expansion 150 11359-1/-2 1	Charpy notched impact strength			ISO 179/1eA
Thermal properties Value Unit Test Standard Melting temperature, 10°C/min 227 °C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 1SO 75-1/-2 0.45 MPa 223 °C C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K Normal, -40-23°C 74 E-6/K Normal, 55-160°C 132 E-6/K E-6/K Parallel, -40-23°C 34 E-6/K E-6/K Parallel, 55-160°C 22 E-6/K UL 746B RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	23°C	5.5	kJ/m²	
Melting temperature, 10°C/min 227 °C ISO 11357-1/-3 Temp. of deflection under load ISO 75-1/-2 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K Normal, -40-23°C 74 E-6/K Normal, 55-160°C 132 E-6/K Parallel, -40-23°C 34 E-6/K Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	-30°C	6	kJ/m²	
Temp. of deflection under load 1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion 150 11359-1/-2 Coeff. of linear therm. expansion 150 11359-1/-2 Rormal 150 11359-1/-2 RORMAN 150 11359-1/-2 150 113	Thermal properties	Value	Unit	Test Standard
1.8 MPa 200 °C 0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Liso 11359-1/-2 normal 89 E-6/K Normal, -40-23°C 74 E-6/K Normal, 55-160°C 132 E-6/K Parallel, -40-23°C 34 E-6/K Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Melting temperature, 10°C/min	227	°C	ISO 11357-1/-3
0.45 MPa 223 °C Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K Normal, -40-23°C 74 E-6/K Normal, 55-160°C 132 E-6/K Parallel, -40-23°C 34 E-6/K Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Temp. of deflection under load			ISO 75-1/-2
Coeff. of linear therm. expansion, parallel 15 E-6/K ISO 11359-1/-2 Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K Normal, -40-23°C 74 E-6/K Parallel, -40-23°C 132 E-6/K Parallel, 55-160°C 34 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	1.8 MPa	200	°C	
Coeff. of linear therm. expansion ISO 11359-1/-2 normal 89 E-6/K Normal, -40-23°C 74 E-6/K Normal, 55-160°C 132 E-6/K Parallel, -40-23°C 34 E-6/K Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	0.45 MPa	223	°C	
normal 89 E-6/K Normal, -40-23°C 74 E-6/K Normal, 55-160°C 132 E-6/K Parallel, -40-23°C 34 E-6/K Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Coeff. of linear therm. expansion, parallel	15	E-6/K	ISO 11359-1/-2
Normal, -40-23°C Normal, 55-160°C 132 E-6/K Parallel, -40-23°C Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Coeff. of linear therm. expansion			ISO 11359-1/-2
Normal, 55-160°C Parallel, -40-23°C Parallel, 55-160°C RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	normal	89	E-6/K	
Parallel, -40-23°C 34 E-6/K Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Normal, -40-23°C	74	E-6/K	
Parallel, 55-160°C 22 E-6/K RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Normal, 55-160°C	132	E-6/K	
RTI, electrical UL 746B 0.75mm 50 °C 1.5mm 50 °C	Parallel, -40-23°C	34	E-6/K	
0.75mm 50 °C 1.5mm 50 °C	Parallel, 55-160°C	22	E-6/K	
1.5mm 50 °C	RTI, electrical			UL 746B
	0.75mm	50	°C	
3mm 50 °C	1.5mm	50	°C	
	3mm	50	°C	

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QUPONT

1.5mm	RTI, impact			UL 746B
1.5mm	· ·	50	°C	
STI, strength	1.5mm	50	°C	
RTI, strength				
1,5mm				UI 746B
1.5mm 50 C		50	°C	61
Sam				
Stammability				
Burning Behav. at 1,5mm nom. thickn.				Test Standard
Thickness tested				
U. Fecognition yes				
Burning Behav. at thickness h				
Thickness tested				
UL recognition				
Doxygen index 19 % ISO 4589-1/-2	111101111100			
Silow Wire Flammability Index				
0.75mm		19	%	
1.5mm 700 ° C C C C C C C C C C	· · · · · · · · · · · · · · · · · · ·	=		IEC 60695-2-1/2
Samm Color C C C C C C C C C				
Clow Wire Ignition Temperature				
0.75mm	-	700	<u>°С</u>	
1.5mm 725	•			IEC 60695-2-1/3
Samm File				
Flammability, 3.0mm	1.5mm	675	°C	
FMVSS Class		725	°C	
Burning rate, Thickness 1 mm 39 mm/min ISO 3795 (FMVSS 302)	Flammability, 3.0mm	HB	-	IEC 60695-11-10
Relative permittivity	FMVSS Class	В	-	ISO 3795 (FMVSS 302)
Relative permittivity	Burning rate, Thickness 1 mm	39	mm/min	ISO 3795 (FMVSS 302)
100Hz	Electrical properties	Value	Unit	Test Standard
1MHz	Relative permittivity			IEC 60250
Dissipation factor, 100Hz	100Hz	3.9	-	
Volume resistivity >1E13 Ohm*m IEC 60093 Surface resistivity 1E14 Ohm IEC 60093 Electric strength 36 kV/mm IEC 60243-1 Comparative tracking index 250 - IEC 60112 Electric Strength, Short Time IEC 60243-1 1mm 36 kV/mm 2mm 27 kV/mm Other properties Value Unit Test Standard Density 1400 kg/m³ ISO 1183 Density of melt 1250 kg/m³ - Water Absorption, Immersion 24h 0.08 % Sim. to ISO 62 Injection Value Unit Test Standard Drying Recommended yes - - Drying Temperature 120 °C - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content \$0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C <td>1MHz</td> <td>3.7</td> <td>-</td> <td></td>	1MHz	3.7	-	
Volume resistivity >1E13 Ohm*m IEC 60093 Surface resistivity 1E14 Ohm IEC 60093 Electric strength 36 kV/mm IEC 60243-1 Comparative tracking index 250 - IEC 60112 Electric Strength, Short Time IEC 60243-1 1mm 36 kV/mm 2mm 27 kV/mm Other properties Value Unit Test Standard Density of melt 1400 kg/m³ ISO 1183 Density of melt 120 kg/m³ - Water Absorption, Immersion 24h 0.08 % Sim. to ISO 62 Injection Value Unit Test Standard Drying Recommended yes - - Drying Temperature 120 °C - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content <0.02	Dissipation factor, 100Hz	15	E-4	IEC 60250
Electric strength Comparative tracking index Electric Strength, Short Time Imm Imm Imm Imm Imm Imm Imm Imm Imm I		>1E13	Ohm*m	IEC 60093
Electric strength Comparative tracking index Electric Strength, Short Time Imm Imm Imm Imm Imm Imm Imm Imm Imm I	Surface resistivity	1E14	Ohm	IEC 60093
Comparative tracking index Electric Strength, Short Time Imm 2mm 2mm 27 kV/mm Other properties Value Unit Test Standard Density Density of melt Water Absorption, Immersion 24h Drying Recommended Drying Recommended Value Unit Test Standard Drying Time, Dehumidified Dryer Processing Moisture Content Melt Temperature Optimum 2 0 °C Min. melt temperature Min. melt temperature Max. mould temperature As low as possible Drying Time Max. mould temperature Max. mould temperature Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature As low as possible Drying Time, Dehumidified Dryer Max. mould temperature As low as possible Drying Timest teandard Max. mould temperature As low as possible Drying Timest teandard Max. mould temperature As low as possible Drying Timest teandard Max. mould temperature As low as possible Drying Timest teandard Drying Timest teandard Max. mould temperature As low as possible Drying Timest teandard Drying Timest te		36	kV/mm	IEC 60243-1
Electric Strength, Short Time		250		IEC 60112
1mm 2mm36 27 27 27 27 27 27 27 27 27 27 27 27 28 27 28 29 20 2				IEC 60243-1
2mm 27 kV/mm Other properties Value Unit Test Standard Density 1400 kg/m³ ISO 1183 Density of melt 1250 kg/m³ - Water Absorption, Immersion 24h 0.08 % Sim. to ISO 62 Injection Value Unit Test Standard Drying Recommended yes - - Drying Temperature 120 °C - - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - - Min. melt temperature 250 °C - - Max. melt temperature Optimum 100 °C - - Min. mould temperature 80 °C - - Min. mould temperature 80 °C - - Max. mould temperature As low as possible -	The state of the s	36	kV/mm	
Other properties Value Unit Test Standard Density 1400 kg/m³ ISO 1183 Density of melt 1250 kg/m³ - Water Absorption, Immersion 24h 0.08 % Sim. to ISO 62 Injection Value Unit Test Standard Drying Recommended yes - Drying Temperature 120 °C - - Drying Time, Dehumidified Dryer 2 - 4 h - - Processing Moisture Content ≤0.02 % - - Melt Temperature Optimum 260 °C - - Min. melt temperature 250 °C - - Max. melt temperature 270 °C - - Mold Temperature Optimum 100 °C - - Min. mould temperature 80 °C - - Max. mould temperature 80 °C - - Back pressure As low as possible -				
Density 1400 kg/m³ ISO 1183 Density of melt 1250 kg/m³ - Water Absorption, Immersion 24h 0.08 % Sim. to ISO 62 Injection Value Unit Test Standard Drying Recommended yes - - Drying Temperature 120 °C - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C - Max. mould temperature 110 °C - Back pressure As low as possible -				Test Standard
Density of melt 1250 kg/m³ - Water Absorption, Immersion 24h 0.08 % Sim. to ISO 62 Injection Value Unit Test Standard Drying Recommended yes - - - Drying Temperature 120 °C - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C - Max. mould temperature 110 °C - Back pressure As low as possible -				
Water Absorption, Immersion 24h0.08 %Sim. to ISO 62InjectionValueUnitTest StandardDrying Recommendedyes				
Injection Value Unit Test Standard Drying Recommended yes				Sim to ISO 62
Drying Recommended yes - - Drying Temperature 120 °C - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C - Max. mould temperature 110 °C - Back pressure As low as possible -				
Drying Temperature 120 °C - Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C - Max. mould temperature 110 °C - Back pressure As low as possible -	,		-	- Standard
Drying Time, Dehumidified Dryer 2 - 4 h - Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C - Max. mould temperature 110 °C - Back pressure As low as possible -			°C	
Processing Moisture Content ≤0.02 % - Melt Temperature Optimum 260 °C - Min. melt temperature 250 °C - Max. melt temperature 270 °C - Mold Temperature Optimum 100 °C - Min. mould temperature 80 °C - Max. mould temperature 110 °C - Back pressure As low as possible -				<u> </u>
Melt Temperature Optimum260 °C-Min. melt temperature250 °C-Max. melt temperature270 °C-Mold Temperature Optimum100 °C-Min. mould temperature80 °C-Max. mould temperature110 °C-Back pressureAs low as possible-				
Min. melt temperature250 °C-Max. melt temperature270 °C-Mold Temperature Optimum100 °C-Min. mould temperature80 °C-Max. mould temperature110 °C-Back pressureAs low as possible-				-
Max. melt temperature270 °C-Mold Temperature Optimum100 °C-Min. mould temperature80 °C-Max. mould temperature110 °C-Back pressureAs low as possible-				-
Mold Temperature Optimum100° C-Min. mould temperature80° C-Max. mould temperature110° C-Back pressureAs low as possible-				
Min. mould temperature80 °C-Max. mould temperature110 °C-Back pressureAs low as possible-				
Max. mould temperature 110 °C - Back pressure As low as possible -				
Back pressure As low as possible -				
			٠.(-
Ejection temperature 175 °C -				-
	Ejection temperature	175	C	-

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Toll-Free (USA): 800 441-0575

Tel: +1 302 999-4592

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Characteristics			
Processing	 Injection Moulding 		
Delivery form	 Pellets 		
Additives	Release agent		
Regional Availability	North America	Asia Pacific	Near East/Africa
	 Europe 	 South and Central America 	 Global

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To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

North America

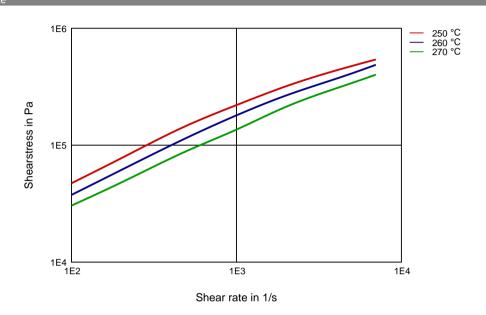
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Diagrams



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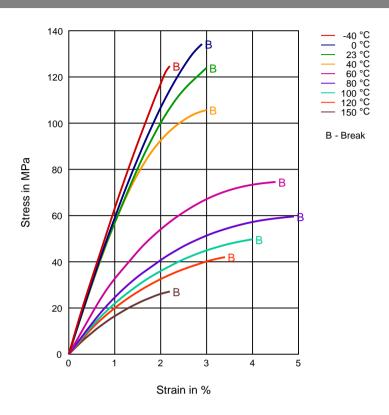
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Stress-strain



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North America

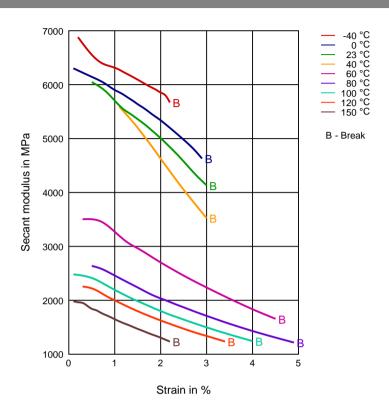
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Secant modulus-strain



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North America

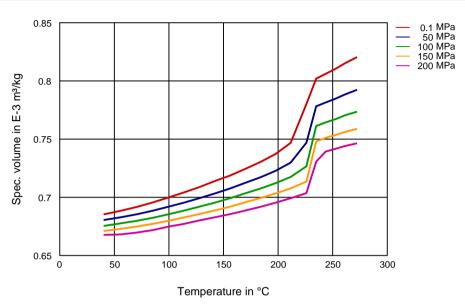
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Specific volume-temperature (pvT)



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Chemical Media Resistance

Acids

Acetic Acid (5% by mass) (23°C)

Citric Acid solution (10% by mass) (23°C)

Lactic Acid (10% by mass) (23°C)

Hydrochloric Acid (36% by mass) (23°C)

Nitric Acid (40% by mass) (23°C) Sulfuric Acid (38% by mass) (23°C)

Sulfuric Acid (5% by mass) (23°C)

Chromic Acid solution (40% by mass) (23°C)

Sodium Hydroxide solution (35% by mass) (23°C)

Sodium Hydroxide solution (1% by mass) (23°C)

Ammonium Hydroxide solution (10% by mass) (23°C)

Isopropyl alcohol (23°C)

Methanol (23°C)

Ethanol (23°C)

Hydrocarbons

n-Hexane (23°C)

Toluene (23°C)

iso-Octane (23°C)

Acetone (23°C)

Ethers

Diethyl ether (23°C)

SAE 10W40 multigrade motor oil (23°C)

SAE 10W40 multigrade motor oil (130°C)

SAE 80/90 hypoid-gear oil (130°C)

Insulating Oil (23°C)

Motor oil OS206 304 Ref.Eng.Oil, ISP (135°C)

Automatic hypoid-gear oil Shell Donax TX (135°C)

Hydraulic oil Pentosin CHF 202 (125°C)

Standard Fuels

ISO 1817 Liquid 1 - E5 (60°C)

ISO 1817 Liquid 2 - M15E4 (60°C)

ISO 1817 Liquid 3 - M3E7 (60°C)

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ISO 1817 Liquid 4 - M15 (60°C)

Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)

Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)

Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Diesel fuel (pref. ISO 1817 Liquid F) (90°C)

Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

Diesel EN 590 (100°C)

Salt solutions

Sodium Chloride solution (10% by mass) (23°C)

Sodium Hypochlorite solution (10% by mass) (23°C)

Sodium Carbonate solution (20% by mass) (23°C)

Sodium Carbonate solution (2% by mass) (23°C)

Zinc Chloride solution (50% by mass) (23°C)

Other

Ethyl Acetate (23°C)

Hydrogen peroxide (23°C)

DOT No. 4 Brake fluid (130°C)

Ethylene Glycol (50% by mass) in water (108°C)

1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)

50% Oleic acid + 50% Olive Oil (23°C)

Water (23°C)

Water (90°C)

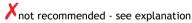
Phenol solution (5% by mass) (23°C)

Coolant Glysantin G48, 1:1 in water (125°C)

Symbols used:

✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).



Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 4mm (Hytrel® measured at 2 mm), IEC Electrical properties measured at 2mm, all ASTM properties measured at 3.2mm, and test temperatures are 23°C unless otherwise stated.

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