

Noryl GTX* Resin GTX8730

Americas: COMMERCIAL

Noryl GTX* GTX8730 resin is a glass filled, high performance blend of PPE/PA that exhibits an excellent balance of high-heat resistance, strength, flow, and conductivity. This grade can be electro-statically painted or powder coated without the need for a conductive primer.

Property

MECHANICAL Value Unit Standard Tensile Stress, yld, Type I, 5 mm/min 185 MPa ASTM D 638 Tensile Stress, brk, Type I, 5 mm/min 185 MPa ASTM D 638 Tensile Strain, yld, Type I, 5 mm/min 3 % ASTM D 638 Tensile Strain, brk, Type I, 5 mm/min 12000 MPa ASTM D 638 Flexural Stress, yld, 1.3 mm/min, 50 mm span 270 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Flexural Stress, ylel, 5 mm/min 185 MPa ISO 527 Tensile Stress, pireak, 5 mm/min 185 MPa ISO 527 Tensile Stress, pireak, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Tensile Modulus, 2 mm/min 3 % ISO 527 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 Flexural Modulus, 2 mm/min 1000 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 900 J/m ASTM D 4812	TYPICAL PROPERTIES ⁽¹⁾			
Tensile Stress, br.k, Type I, 5 mm/min 185 MPa ASTM D 638 Tensile Strain, yld, Type I, 5 mm/min 3 % ASTM D 638 Tensile Strain, jvd, Type I, 5 mm/min 3 % ASTM D 638 Tensile Modulus, 5 mm/min 12000 MPa ASTM D 638 Flexural Stress, yld, 1.3 mm/min, 50 mm span 270 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min 185 MPa ISO 527 Tensile Stress, jeld, 5 mm/min 185 MPa ISO 527 Tensile Stress, jeld, 2 mm/min 3 % ISO 527 Tensile Modulus, 2 mm/min 3 % ISO 527 Tensile Modulus, 2 mm/min 300 MPa ISO 527 Tensile Modulus, 2 mm/min 200 MPa ISO 527 Tensile Modulus, 2 mm/min 9300 MPa ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 Izou Impact, notched, 23°C 90 J/m ASTM D 4812	MECHANICAL	Value	Unit	Standard
Tensile Strain, yld, Type I, 5 mm/min 3 % ASTM D 638 Tensile Strain, brk, Type I, 5 mm/min 3 % ASTM D 638 Flexural Stress, yld, 1.3 mm/min, 50 mm span 270 MPa ASTM D 638 Flexural Modulus, 5. mm/min, 50 mm span 9300 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, break, 5 mm/min 3 % ISO 527 Tensile Stress, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Tensile Modulus, 2 mm/min 3 % ISO 527 Tensile Modulus, 2 mm/min 12000 MPa ISO 527 Tensile Modulus, 2 mm/min 12000 MPa ISO 178 Flexural Stress, yield, 2 mm/min 9300 MPa ISO 178 Tensile Modulus, 2 mm/min 9300 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 90 J/m ASTM D 4812 <td>Tensile Stress, yld, Type I, 5 mm/min</td> <td>185</td> <td>MPa</td> <td>ASTM D 638</td>	Tensile Stress, yld, Type I, 5 mm/min	185	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min 3 % ASTM D 638 Tensile Modulus, 5 mm/min, 50 mm span 270 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, yield, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Tensile Modulus, 2 mm/min 9300 MPa ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 Tool Impact, notched, 23°C 1100 J/m ASTM D 4812 Izod Impact, unotched, 30°C 950 J/m ASTM D 256 Instrumented Impact Total Energy, 23°C 90 J/m ASTM D 266	Tensile Stress, brk, Type I, 5 mm/min	185	MPa	ASTM D 638
Tensile Modulus, 5 mm/min 12000 MPa ASTM D 638 Flexural Stress, yiel, 1.3 mm/min, 50 mm span 270 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, break, 5 mm/min 3 % ISO 527 Tensile Strain, yield, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Strain, yield, 2 mm/min 12000 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, nonched, 23°C 1100 J/m ASTM D 4812 Izod Impact, notched, 30°C 68 J/m ASTM D 256 Izod Impact, notched, 30°C 68 J/m ASTM D 260 Izod Impact, notched, 80°10°4 +23°C 60 k.J/m² ISO 180/1U	Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Flexural Stress, yid, 1.3 mm/min, 50 mm span 270 MPa ASTM D 790 Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, break, 5 mm/min 185 MPa ISO 527 Tensile Strain, yield, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Flexural Stress, yield, 2 mm/min 270 MPa ISO 527 Flexural Modulus, 1 mm/min 270 MPa ISO 527 Flexural Modulus, 1 mm/min 270 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, notched, 33°C 668 J/m ASTM D 256 Izod Impact, notched 80°10'4 +23°C 90 J/m ASTM D 261 Izod Impact, notched 80°10'4 +23°C 9 kJ/m ² ISO 180/1U <td< td=""><td>Tensile Strain, brk, Type I, 5 mm/min</td><td>3</td><td>%</td><td>ASTM D 638</td></td<>	Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span 9300 MPa ASTM D 790 Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, break, 5 mm/min 185 MPa ISO 527 Tensile Strain, yield, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Tensile Modulus, 2 mm/min 33 % ISO 527 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 39°C 900 J/m ASTM D 4812 Izod Impact, unnotched, 39°C 90 J/m ASTM D 256 Izod Impact, unnotched, 39°C 60 J ASTM D 256 Izod Impact, unnotched 80°10°4 +23°C 60 J/m ASTM D 3763 Izod Impact, unnotched 80°10°4 +23°C 7 KJ/m² ISO 180/1U Izod Impact, notched 8	Tensile Modulus, 5 mm/min	12000	MPa	ASTM D 638
Tensile Stress, yield, 5 mm/min 185 MPa ISO 527 Tensile Stress, break, 5 mm/min 185 MPa ISO 527 Tensile Strain, yield, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Tensile Modulus, 2 mm/min 2000 MPa ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, notched, 30°C 900 J/m ASTM D 256 Izod Impact, notched, 30°C 68 J/m ASTM D 256 Izod Impact, notched 80°10°4 +23°C 60 k.J/m ² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 60 k.J/m ² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 k.J/m ² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 k.J/m ² ISO 180/1A I	Flexural Stress, yld, 1.3 mm/min, 50 mm span	270	MPa	ASTM D 790
Tensile Strain, yield, 5 mm/min 185 MPa ISO 527 Tensile Strain, yield, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 3 % ISO 527 Flexural Stress, yield, 2 mm/min 300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 11100 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 900 J/m ASTM D 4812 Izod Impact, unnotched, 30°C 900 J/m ASTM D 256 Izod Impact, unnotched, 30°C 68 J/m ASTM D 256 Izod Impact, unnotched 80°10°4 +23°C 600 kJ/m ² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 600 kJ/m ² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 kJ/m ² ISO 180/1A Izod Impact, unnotched 80°10°4 +23°C 9 kJ/m ² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 7 kJ/m ² ISO 180/1A	Flexural Modulus, 1.3 mm/min, 50 mm span	9300	MPa	ASTM D 790
Tensile Strain, yield, 5 mm/min 3 % ISO 527 Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Flexural Stress, yield, 2 mm/min 270 MPa ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, notched, 23°C 90 J/m ASTM D 256 Instrumented Impact, notched, 30°C 668 J/m ASTM D 256 Isod Impact, unnotched 80°10°4 +23°C 60 kJ/m ² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 kJ/m ² ISO 180/1J Izod Impact, unotched 80°10°4 +23°C 9 kJ/m ² ISO 180/1J Izod Impact, notched 80°10°4 +23°C 9 kJ/m ² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m ² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 7 kJ/m ² ISO 180/1A </td <td>Tensile Stress, yield, 5 mm/min</td> <td>185</td> <td>MPa</td> <td>ISO 527</td>	Tensile Stress, yield, 5 mm/min	185	MPa	ISO 527
Tensile Strain, break, 5 mm/min 3 % ISO 527 Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Flexural Stress, yield, 2 mm/min 270 MPa ISO 178 IMPACT 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 950 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 900 J/m ASTM D 256 Izod Impact, notched, -30°C 68 J/m ASTM D 256 Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m2 ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 kJ/m2 ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, unotched 80°10°4 +23°C 7 kJ/m2 ISO 180/1A Izod Impact, unotched 80°10°4 +23°C 7 kJ/m2 ISO 180/1A Izod Impact, unotched 80°10°4 +23°C 7 kJ/m2 ISO 180/1A Izo	Tensile Stress, break, 5 mm/min	185	MPa	ISO 527
Tensile Modulus, 1 mm/min 12000 MPa ISO 527 Flexural Stress, yield, 2 mm/min 270 MPa ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, unnotched, 30°C 950 J/m ASTM D 4812 Izod Impact, notched, 30°C 90 J/m ASTM D 4812 Izod Impact, notched, 30°C 90 J/m ASTM D 256 Izod Impact, notched, 30°C 60 kJ/m2 ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m2 ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 kJ/m2 ISO 180/1U Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 8 KJ/m2 ISO 180/1A <tr< td=""><td>Tensile Strain, yield, 5 mm/min</td><td>3</td><td>%</td><td>ISO 527</td></tr<>	Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Flexural Stress, yield, 2 mm/min 1SO 178 ISO 178 Flexural Modulus, 2 mm/min 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1010 J/m ASTM D 4812 Izod Impact, unnotched, 33°C 950 J/m ASTM D 4812 Izod Impact, notched, 23°C 90 J/m ASTM D 256 Izod Impact, notched, 33°C 68 J/m ASTM D 256 Izod Impact, notched, 30°C 68 J/m ASTM D 256 Izod Impact, notched 80°10°4 +23°C 60 kJ/m2 ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 90 kJ/m2 ISO 180/1U Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +23°C 9 kJ/m2 ISO 180/1A <td< td=""><td>Tensile Strain, break, 5 mm/min</td><td>3</td><td>%</td><td>ISO 527</td></td<>	Tensile Strain, break, 5 mm/min	3	%	ISO 527
Flexural Modulus, 2 mm/min 9300 MPa ISO 178 IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, unnotched, 30°C 950 J/m ASTM D 4812 Izod Impact, notched, 30°C 900 J/m ASTM D 256 Izod Impact, notched, 30°C 68 J/m ASTM D 256 Izod Impact, notched, 30°C 68 J/m ASTM D 256 Isod Impact, notched 80°10°4 +23°C 600 kJ/m2 ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 55 kJ/m2 ISO 180/1U Izod Impact, notched 80°10°4 +30°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +30°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +30°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +30°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +30°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80°10°4 +30°C 7 KJ/m2 ISO 180/1A </td <td>Tensile Modulus, 1 mm/min</td> <td>12000</td> <td>MPa</td> <td>ISO 527</td>	Tensile Modulus, 1 mm/min	12000	MPa	ISO 527
IMPACT Value Unit Standard Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, unnotched, 30°C 950 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 900 J/m ASTM D 4812 Izod Impact, notched, 23°C 90 J/m ASTM D 256 Izod Impact, notched, 30°C 68 J/m ASTM D 3763 Izod Impact, unnotched 80°10°4 +23°C 60 KJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 60 KJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 60 KJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 KJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 9 KJ/m² ISO 180/1A Izod Impact, unotched 80°10°4 +23°C 7 KJ/m² ISO 180/1A Izod Impact, unotched 80°10°4 +23°C 9 KJ/m² ISO 180/1A Izod Impact, unotched 80°10°4 spe62mm 8 KJ/m² ISO 180/1A Izod Impact, unotched 80°10°4 spe62mm 210 °C	Flexural Stress, yield, 2 mm/min	270	MPa	ISO 178
Izod Impact, unnotched, 23°C 1100 J/m ASTM D 4812 Izod Impact, unnotched, -30°C 950 J/m ASTM D 4812 Izod Impact, notched, 23°C 90 J/m ASTM D 256 Izod Impact, notched, -30°C 68 J/m ASTM D 256 Istrumented Impact Total Energy, 23°C 10 J ASTM D 3763 Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 99 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 99 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 sp=62mm 8 kJ/m² ISO 179/16A THERMAL Value Unit	Flexural Modulus, 2 mm/min	9300	MPa	ISO 178
Izod Impact, unnotched, -30°C 950 J/m ASTM D 4812 Izod Impact, notched, 23°C 90 J/m ASTM D 256 Izod Impact, notched, -30°C 68 J/m ASTM D 256 Instrumented Impact Total Energy, 23°C 10 J ASTM D 3763 Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 +23°C 9 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 +23°C 9 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 +23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 8 kJ/m² ISO 179/1A THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 4525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C <	ІМРАСТ	Value	Unit	Standard
Izod Impact, notched, 23°C 90 J/m ASTM D 256 Izod Impact, notched, -30°C 68 J/m ASTM D 256 Instrumented Impact Total Energy, 23°C 10 J ASTM D 3763 Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, unnotched 80*10*4 +23°C 9 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 9 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +30°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +30°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 sp=62mm 8 kJ/m² ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 26E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C	Izod Impact, unnotched, 23°C	1100	J/m	ASTM D 4812
Izod Impact, notched, -30°C 68 J/m ASTM D 256 Instrumented Impact Total Energy, 23°C 10 J ASTM D 3763 Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, unnotched 80*10*4 +23°C 55 kJ/m² ISO 180/1U Izod Impact, unnotched 80*10*4 +23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +30°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 sp=62mm 8 kJ/m² ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 1359-2 Vicat Softening Temp, Rate B/50 210 °C <t< td=""><td>Izod Impact, unnotched, -30°C</td><td>950</td><td>J/m</td><td>ASTM D 4812</td></t<>	Izod Impact, unnotched, -30°C	950	J/m	ASTM D 4812
Instrumented Impact Total Energy, 23°C 10 J ASTM D 3763 Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 -30°C 55 kJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 -23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -23°C 9 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -23°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 7 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 7 kJ/m² ISO 180/1A Charpy 23°C, V -notch Edgew 80°10°4 sp=62mm 8 kJ/m² ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 210 °C <td>Izod Impact, notched, 23°C</td> <td>90</td> <td>J/m</td> <td>ASTM D 256</td>	Izod Impact, notched, 23°C	90	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m2 ISO 180/1U Izod Impact, unnotched 80*10*4 +23°C 55 kJ/m2 ISO 180/1U Izod Impact, unotched 80*10*4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80*10*4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m2 ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 8 kJ/m2 ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C	Izod Impact, notched, -30°C	68	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 -30°C 55 kJ/m2 ISO 180/1U Izod Impact, notched 80*10*4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80*10*4 +23°C 7 kJ/m2 ISO 180/1A Izod Impact, notched 80*10*4 -30°C 7 kJ/m2 ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 8 kJ/m2 ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 2.10 °C ISO 1306 CTE, -40°C to 40°C, flow 210 °C ISO 11359-2 CTE, -40°C to 40°C, flow 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306	Instrumented Impact Total Energy, 23°C	10	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C 9 kJ/m2 ISO 180/1A Izod Impact, notched 80*10*4 -30°C 7 kJ/m2 ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 8 kJ/m2 ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 210 °C ISO 306 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf <td>Izod Impact, unnotched 80*10*4 +23°C</td> <td>60</td> <td>kJ/m²</td> <td>ISO 180/1U</td>	Izod Impact, unnotched 80*10*4 +23°C	60	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 -30°C 7 kJ/m2 ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 8 kJ/m2 ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 2.10 °C ISO 306 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard S	Izod Impact, unnotched 80*10*4 -30°C	55	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 8 kJ/m² ISO 179/1eA THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard	Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
THERMAL Value Unit Standard Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 2.10 °C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	Izod Impact, notched 80*10*4 -30°C	7	kJ/m²	ISO 180/1A
Vicat Softening Temp, Rate B/50 210 °C ASTM D 1525 HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 210 °C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8	kJ/m²	ISO 179/1eA
HDT, 0.45 MPa, 3.2 mm, unannealed 220 °C ASTM D 648 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	THERMAL	Value	Unit	Standard
CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, flow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	Vicat Softening Temp, Rate B/50	210	°C	ASTM D 1525
CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	HDT, 0.45 MPa, 3.2 mm, unannealed	220	°C	ASTM D 648
CTE, -40°C to 40°C, flow 2.6E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	CTE, -40°C to 40°C, flow	2.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow 7.8E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 210 °C ISO 306 Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50210°CISO 306Vicat Softening Temp, Rate B/120210°CISO 306HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm220°CISO 75/BfPHYSICALValueUnitStandardSpecific Gravity1.37-ASTM D 792	CTE, -40°C to 40°C, flow	2.6E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120 210 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 220 °C ISO 75/Bf PHYSICAL Value Unit Standard Specific Gravity 1.37 - ASTM D 792	Vicat Softening Temp, Rate B/50	210	°C	ISO 306
PHYSICALValueUnitStandardSpecific Gravity1.37-ASTM D 792	Vicat Softening Temp, Rate B/120	210	°C	ISO 306
Specific Gravity 1.37 - ASTM D 792	HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	220	°C	ISO 75/Bf
	PHYSICAL	Value	Unit	Standard
Mold Shrinkage, flow, 3.2 mm 0.2 - 0.25 % SABIC Method	Specific Gravity	1.37	-	ASTM D 792
	Mold Shrinkage, flow, 3.2 mm	0.2 - 0.25	%	SABIC Method

Mold Shrinkage, xflow, 3.2 mm	0.65 - 0.8	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	13.7	g/10 min	ASTM D 1238
Density	1.37	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	4	%	ISO 62
Moisture Absorption (23°C / 50% RH)	1.2	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	10	cm ³ /10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	5.E+02 - 1.E+04	Ohm-cm	SABIC Method

Source GMD, last updated:06/21/2007

Processing

• Do NOT mix NORYL GTX* resin with other grades of NORYL* resins.

Parameter		
Injection Molding	Value	Unit
Drying Temperature	95 - 105	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.07	%
Minimum Moisture Content	0.02	%
Melt Temperature	280 - 305	°C
Nozzle Temperature	280 - 305	°C
Front - Zone 3 Temperature	275 - 305	°C
Middle - Zone 2 Temperature	270 - 305	°C
Rear - Zone 1 Temperature	265 - 305	°C
Mold Temperature	75 - 120	°C
Back Pressure	0.3 - 1.4	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 50	%
Vent Depth	0.013 - 0.038	mm
	Source GMD, la	ast updated:06/21/2

• Polystyrene and acrylic regrind are effective purging Materials. Use temperature range appropriate for particular purging resin.

• Regrind must also be dried. Maximum 25% regrind.

• Dry at recommended temperatures and times for optimum performance. Overdrying can cause loss of physical properties and/or create appearance defects. Do not exceed recommended basic drying time and temperature above or:

- 4-8 hrs at 95°C (200°F), 10 hrs max
- 6-12 hrs at 80°C (175°F), 16 hrs max
- 8-16 hrs at 65°C (150°F), 24 hrs max

• Avoid melt temperature in excess of 300°C (575°F) and residence times over 6-8 minutes (may affect properties and/or appearance).

• Nozzle temperature controls assist in elimination of drool premature freeze-off.

• Shot sizes in excess of 50% barrel capacity can lead to difficulties in providing a consistent, homogenous plastic melt.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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