

# 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 <sup>(1)</sup>			
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 <sup>2</sup> 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 <sup>2</sup> ISO 180/1U       Izod Impact, unnotched 80°10°4 +23°C     60     k.J/m <sup>2</sup> ISO 180/1U       Izod Impact, unnotched 80°10°4 +23°C     9     k.J/m <sup>2</sup> ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     9     k.J/m <sup>2</sup> 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 <sup>2</sup> ISO 180/1U       Izod Impact, unnotched 80°10°4 +23°C     600     kJ/m <sup>2</sup> ISO 180/1U       Izod Impact, unnotched 80°10°4 +23°C     9     kJ/m <sup>2</sup> ISO 180/1A       Izod Impact, unnotched 80°10°4 +23°C     9     kJ/m <sup>2</sup> ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     7     kJ/m <sup>2</sup> 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 <sup>2</sup> ISO 180/1U       Izod Impact, unnotched 80°10°4 +23°C     9     kJ/m <sup>2</sup> ISO 180/1J       Izod Impact, unotched 80°10°4 +23°C     9     kJ/m <sup>2</sup> ISO 180/1J       Izod Impact, notched 80°10°4 +23°C     9     kJ/m <sup>2</sup> ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     9     kJ/m <sup>2</sup> ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     7     kJ/m <sup>2</sup> 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 <sup>3</sup> /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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