

# NORYL GTXTM RESIN GTX964W

## **REGION ASIA**

## **DESCRIPTION**

NORYL GTX GTX964W resin is a blend of Polyphenylene Ether and Polyamide resin with very high impact and high flow. The material wsa designed for large parts, body panels, and thinwall applications.

## **TYPICAL PROPERTY VALUES**

Revision 20180905

NECHANICAI         Transile Streas, yid. 75pe 1,50 mm/min         44         MPa         ASTMD D638           Flexural Streas, yid. 2,6 mm/min         56         8         ASTMD D638           Flexural Streas, yid. 2,6 mm/min, 100 mm span         1830         MPa         ASTMD 790           Flexural Modulus, 2,6 mm/min, 100 mm span         1830         MPa         ASTMD 790           Tensile Streas, break, 50 mm/min         4         MPa         1805 227           Tensile Streas, break, 50 mm/min         4         \$         180 227           Tensile Streas, break, 50 mm/min         70         MPa         180 727           Tensile Streas, break, 50 mm/min         70         MPa         180 727           Tensile Streas, yield, 2, mm/min         70         MPa         180 727           Tensile Streas, break, 50 mm/min         70         MPa         180 727           Tensile Streas, yield, 2, mm/min         70         MPa         180 727           Tensile Streas, yield, 2, mm/min         70         MPa         180 727           Tensile Streas, yield, 2, mm/min         80         MPa         180 72           Tensural Streas, yield, 2, mm/min         80         MPa         180 72           Tensural Streas, yield, 2, mm/min         80         <	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, Ink. Type I, 50 mm/min         56         %         ASTM D 284           Flexural Stress, yld, 2,6 mm/min, 100 mm span         73         Ma         ASTM D 790           Flexural Modulus, 2,6 mm/min, 100 mm span         50         Ma         SSTM D 790           Tensile Stress, byeld, 50 mm/min         50         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         4         %         SSD 527           Tensile Strain, byeld, 50 mm/min         70         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         70         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         70         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         70         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         70         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         80         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         80         SSD 527           Tensile Strain, byeld, 50 mm/min         80         SSD 527           Tensile Strain, byeld, 50 mm/min         80         Ma         SSD 527           Tensile Strain, byeld, 50 mm/min         80         Ma         SSD 18           Tensile Strain, bye	MECHANICAL			
Fleeural Stress, yild, 2.6 mm/min, 100 mm span         73         Mina         ASTM D 790           Fleeural Modulus, 2.6 mm/min, 100 mm span         1830         Mana         ASTM D 790           Tensile Stress, yiled, 50 mm/min         45         Mana         1802 27           Tensile Stress, benefa, 50 mm/min         4         4         50 527           Tensile Stresin, break, 50 mm/min         50         3         100 527           Tensile Stress, yiled, 50 mm/min         60         4         60 527           Tensile Stress, break, 50 mm/min         60         4         60 527           Tensile Stress, yiled, 50 mm/min         60         4         60 527           Tensile Stress, yiled, 50 mm/min         60         7         60 527           Tensile Stress, yiled, 50 mm/min         60         80 70         70 50 70           Tensile Stress, yiled, 50 mm/min         60         80 70         80 70           Tensile Stress, yiled, 50 mm/min         60         70 70         70 70         80 70         80 70           Brown All Street         40         80         80 70         80 70         80 70           Bould Street         50         80 70         80 70         80 70         80 70           Bould Instruc	Tensile Stress, yld, Type I, 50 mm/min	44	MPa	ASTM D 638
Resural Modulus, 2.6 mm/min, 100 mm span         930         MPa         ASTM D 790           Tensile Stress, yield, 50 mm/min         50         MPa         10 527           Tensile Stress, yield, 50 mm/min         4         8         50 527           Tensile Strain, yield, 50 mm/min         4         8         50 527           Tensile Strain, break, 50 mm/min         70         MPa         50 72           Resural Modulus, 2 mm/min         70         MPa         50 72           Retural Modulus, 2 mm/min         70         MPa         50 72           Retural Modulus, 2 mm/min         80         80 70         80 70           Retural Modulus, 2 mm/min         70         MPa         50 72           Retural Modulus, 2 mm/min         70         MPa         50 72           Retural Modulus, 2 mm/min         70         MPa         50 78           Retural Modulus, 2 mm/min         70         MPa         50 78           Retural Modulus, 2 mm/min         80         80 70         85 70           Retural Modulus, 2 mm/min         80         80 70         85 70           Retural Modulus, 2 mm/min         80         80 70         85 70           Return Modulus, 2 mm/min         80 80         85 80	Tensile Strain, brk, Type I, 50 mm/min	56	%	ASTM D 638
Tensile Stress, yield, 50 mm/min         50         MPa         ISO 527           Tensile Stress, preak, 50 mm/min         45         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         4         MPa         ISO 527           Tensile Strain, break, 50 mm/min         50         %         ISO 527           Flexural Stress, yield, 2 mm/min         70         MPa         ISO 178           Elexural Modulus, 2 mm/min         800         MPa         ISO 178           Interval Modulus, 2 mm/min         800         MPa         SIT 188           Interval Modulus, 2 mm/min         800         MPM         SIT 188           Interval Modulus, 2 mm/min         800 <td>Flexural Stress, yld, 2.6 mm/min, 100 mm span</td> <td>73</td> <td>MPa</td> <td>ASTM D 790</td>	Flexural Stress, yld, 2.6 mm/min, 100 mm span	73	MPa	ASTM D 790
Tensile Stress, break, 50 mm/min         45         MPa         SO 527           Tensile Strain, yield, 50 mm/min         4         8         105 527           Tensile Strain, preak, 50 mm/min         50         8         105 527           Flexural Modulus, 2 mm/min         100         MPa         105 72           Interval Freez, yield, 2 mm/min         1800         MPa         100 72           Important Preserved Modulus, 2 mm/min         1800         MPa         100 72           Interval Modulus, 2 mm/min         1800         MPa         100 72           Important Modulus, 2 mm/min         1800         MPa         100 78           Interval Modulus, 2 mm/min         1800         MPa         100 78           Important Modulus, 2 mm/min         1800         MPa         100 78           Important Modulus, 2 mm/min         1800         MPa         20 Mm	Flexural Modulus, 2.6 mm/min, 100 mm span	1830	MPa	ASTM D 790
Tensile Strain, yield, 50 mm/min         4         9         50 527           Tensile Strain, break, 50 mm/min         50         8         105 27           Flexural Stress, yield, 2 mm/min         70         MPa         105 178           Flexural Modulus, 2 mm/min         1800         MPa         105 178           Horpact, notched, 23°C         288         J/m         ASIM D 256           Instrumented Impact, notched, 23°C         28         J/m         ASIM D 3763           Ized Impact, notched 80°10°4 -23°C         20         J/m²         SO 180/1A           Ized Mipact, notched 80°10°4 -23°C         20         J/m²         SO 180/1A           Ized Mipact, notched 80°10°4 -23°C         20         J/m²         SO 180/1A           Ized Mipact, notched 80°10°4 -23°C         20         J/m²         SO 180/1A           Londy Jan, C., wortch Edgew 80°10°4 spe Earm         4         J/m²         SO 191/14           Longy Jan, C., wortch Edgew 80°10°4 spe Earm         8         °         C         ASIM D 648           Thermal Conductivity         8         2         C         ASIM D 648           The Mark Long Londy Strain (and Street Early Street	Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Strain, break, 50 mm/min         50         %         150 578           Flexural Stress, yield, 2 mm/min         1800         MPa         150 178           IEWARD Modulus, 2 mm/min         1800         MPa         150 178           IMPACT         US           Izod Impact, notched, 23°C         528         Jm         ASM D 256           Izod Impact, notched 80°10°4 + 23°C         41         Jm²         ASM D 256           Izod Impact, notched 80°10°4 + 23°C         42         Jm²         05 180/1A           Izod Impact, notched 80°10°4 + 23°C         20         Jm²         05 180/1A           Charpy 3°C, Vnotch Edgew 80°10°4 sp=62mm         45         Jm²         05 179/1eA           Charpy 3°C, Vnotch Edgew 80°10°4 sp=62mm         45         Jm²         05 179/1eA           Charpy 3°C, Vnotch Edgew 80°10°4 sp=62mm         45         Vm²         05 179/1eA           Charpy 3°C, Vnotch Edgew 80°10°4 sp=62mm         45         Vm²         05 179/1eA           Charpy 3°C, Vnotch Edgew 80°10°4 sp=62mm         185         °         0         20 179/1eA           DT, 4, Strang 4, St	Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Flexural Stress, yield, 2 mm/min         70         MPa         100 178           Flexural Modulus, 2 mm/min         1800         MPa         100 178           IMPACT         VINERACT         VINERACT         VINERACT         ASTM D 256           Instrumented Impact, notched, 23°C         528         J/m         ASTM D 256           Lood Impact, notched 80°10°4 + 23°C         20         kl/m²         SO 180/1A           Lood Impact, notched 80°10°4 + 23°C         20         kl/m²         SO 180/1A           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kl/m²         SO 179/1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kl/m²         SO 179/1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kl/m²         SO 179/1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kl/m²         SO 179/1eA           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         185         °         C         ASTM D 648           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         185         °         C         ASTM D 648           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         185         °         C         ASTM D 648           Thermal Conductivity         80         RO3         C <td>Tensile Strain, yield, 50 mm/min</td> <td>4</td> <td>%</td> <td>ISO 527</td>	Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Flexural Modulus, 2 mm/min         1800         M²e         150 T8           IMPACT         Impact, notched, 23°C         528         J/m         ASTM D 256           Ist furmented Impact, notched 80°10°4 + 23°C         41         J/m²         S0180/1A           Izod Impact, notched 80°10°4 + 23°C         50         J/m²         ISO 180/1A           Izod Impact, notched 80°10°4 + 23°C         45         J/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         J/m²         ISO 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         J/m²         ISO 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         J/m²         ISO 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         J/m²         ISO 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         20         W/m²         ASTM C 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         185         C         ASTM C 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         20         ASTM C 179-1eA           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         20         ASTM C 179-1eA           Ukat Softening Temp, Rate Alpo         10         20         S0 306           Ukat Softe	Tensile Strain, break, 50 mm/min	50	%	ISO 527
IMPACT         Izod Impact, notched, 23°C         528         J/m         ASTM D 256           Ist prumented Impact, Total Energy, 23°C         41         J         ASTM D 3763           Izod Impact, notched 80°10°4 + 23°C         50         J/m²         S0 180/1A           Izod Impact, notched 80°10°4 + 23°C         20         J/m²         50 180/1A           Izod Impact, notched 80°10°4 + 30°C         20         J/m²         50 180/1A           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         J/m²         50 179/1eA           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         45         J/m²         50 179/1eA           ThERMA         T         6         ASTM D 648           THERMA         85         °         C         ASTM D 648           Thermal Conductivity         20         M/m²C         ASTM D 670           Vicat Softening Temp, Rate A/50         175         °         C         S0 306           Vicat Softening Temp, Rate B/120         180         °         C         S0 306           B/D/18e, 0.45MPa Edgew 120°10°4 sp=100mm         180         °         C         S0 306           B/D/18e, 0.45MPa Edgew 120°10°4 sp=100mm         180         S0 306         S0 307         S0 306	Flexural Stress, yield, 2 mm/min	70	MPa	ISO 178
Ized Impact, notched, 23°C         528         I/m         ASTM D 256           Ized Impact, notched Bor10°4 + 23°C         41         J         ASTM D 3763           Ized Impact, notched 80°10°4 + 23°C         50         I/m²         80 180/1A           Ized Impact, notched 80°10°4 + 23°C         20         I/m²         80 180/1A           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         I/m²         80 179/1eA           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         45         I/m²         80 179/1eA           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         45         I/m²         80 179/1eA           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         45         I/m²         80 179/1eA           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         85         C         ASTM D 648           Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm         85         °         C         ASTM D 648           THERMA         10°C         ASTM D 648         Reserved         Mark D 648         Reserved         Mark D 648         Reserved         Mark D 648         Reserved         Mark D 603	Flexural Modulus, 2 mm/min	1800	MPa	ISO 178
Instrumented Impact Total Energy, 23°C         41         J         ASTM D 3763           Izod Impact, notched 80*10*4.23°C         50         kJ/m²         ISO 180/1A           Izod Impact, notched 80*10*4.93°C         20         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*4.sp=62mm         45         kJ/m²         ISO 179/1eA           Charpy 30°C, V-notch Edgew 80*10*4.sp=62mm         20         kJ/m²         ISO 179/1eA           THERMAL           HOT, 0.45 MPa, 6.4 mm, unannealed         185         °C         ASTM D 648           Thermal Conductivity         240         °C         ASTM C177           Vicat Softening Temp, Rate A/50         240         °C         ISO 306           Vicat Softening Temp, Rate B/120         175         °C         ISO 306           Vicat Softening Temp, Rate B/120         180         °C         ISO 306           HOT/Be, 0.45MPa Edgew 120*10*4 sp=100mm         19         °C         ISO 306           HOT/Be, 0.45MPa Edgew 120*10*4 sp=100mm         10.8         ×         ASTM D 792           Water Absorption, equilibrium, 23C         3.5         X         X         ASTM D 570           Water Absorption, 50% RH, equilib         1.9         X	IMPACT			
Izod Impact, notched 80°10°4 + 23°C         50         kI/m²         ISO 180 / 1A           Izod Impact, notched 80°10°4 + 23°C         20         kI/m²         ISO 180 / 1A           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kI/m²         ISO 179 / 1eA           Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm         20         kI/m²         ISO 179 / 1eA           THERMA           THERMA           Thermal Conductivity         20         W/m°C         ASTM D 648           Vicat Softening Temp, Rate A/50         240         °C         ASTM C177           Vicat Softening Temp, Rate B/120         175         °C         ISO 306           Vicat Softening Temp, Rate B/120         180         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         So 306         ISO 306           Wicat Softening Temp, Rate B/12	Izod Impact, notched, 23°C	528	J/m	ASTM D 256
Izod Impact, notched 80°10°4·30°C         20         kl/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kl/m²         ISO 179/1eA           Charpy-30°C, V-notch Edgew 80°10°4 sp=62mm         20         kl/m²         ISO 179/1eA           THERMAL           HDT, 0.45 MPa, 6.4 mm, unannealed         185         °C         ASTM D 648           Thermal Conductivity         2.23         W/m²°C         ASTM C177           Vicat Softening Temp, Rate A/50         240         °C         ISO 306           Vicat Softening Temp, Rate B/50         175         °C         ISO 306           Vicat Softening Temp, Rate B/120         180         °C         ISO 306           PHYSICAL           Specific Gravity         1.08         *         ASTM D 792           Water Absorption, equilibrium, 23C         3.5         %         ASTM D 570           Water Absorption, 50% RH, equilib         1.9         %         ASTM D 570           Mold Shrinkage, flow         1.3         %         ASIM D 570           Mold Shrinkage, Klow         1.3         %         ASIM D 648           Million         1.3         %         ASIM D 648 <t< td=""><td>Instrumented Impact Total Energy, 23°C</td><td>41</td><td>J</td><td>ASTM D 3763</td></t<>	Instrumented Impact Total Energy, 23°C	41	J	ASTM D 3763
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm         45         kl/m²         ISO 179/16A           Charpy-30°C, V-notch Edgew 80°10°4 sp=62mm         20         kl/m²         ISO 179/16A           THERMAL           HDT, 0,45 MPa, 6,4 mm, unannealed         185         °C         ASTM D 648           Thermal Conductivity         240         W/m°C         ASTM C177           Vicat Softening Temp, Rate A/50         240         °C         ISO 306           Vicat Softening Temp, Rate B/50         175         °C         ISO 306           Vicat Softening Temp, Rate B/120         180         °C         ISO 306           HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm         175         °C         ISO 306           HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm         175         °C         ISO 306           HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm         108         °C         ASTM D 792           Water Absorption, equilibrium, 23C         3.5         %         ASTM D 570           Water Absorption, 50% RH, equilib         1.5         %         ASTM D 570           Mold Shrinkage, flow         1.3         %         ASIM D method           Mold Shrinkage, xflow         3	Izod Impact, notched 80*10*4 +23°C	50	kJ/m²	ISO 180/1A
Charpy-30°C, V-notch Edgew 80°10°4 sp=62mm         20         kl/m²         ISO 179/1eA           THERMAL           HDT, 0.45 MPa, 6.4 mm, unannealed         185         °C         ASTM D 648           Thermal Conductivity         0.23         W/m°C         ASTM C177           Vicat Softening Temp, Rate A/50         240         °C         150 306           Vicat Softening Temp, Rate B/50         175         °C         150 306           Wicat Softening Temp, Rate B/120         180         °C         150 306           HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm         175         °C         150 306           PHYSICA           Specific Gravity         1.08         2         ASTM D 792           Water Absorption, equilibrium, 23C         3.5         8         ASTM D 570           Water Absorption, 50% RH, equilib         1.19         8         ASIM D 570           Mold Shrinkage, rflow         1.3         8         ASIM D 570           Mold Shrinkage, xflow         1.3         8         ASIM D 50           Mold Shrinkage, xflow         1.3         8         ASIM D 50           Mold Shrinkage, xflow         2	Izod Impact, notched 80*10*4 -30°C	20	kJ/m²	ISO 180/1A
THERMAL           HDT, 0.45 MPa, 6.4 mm, unannealed         185         °C         ASTM D 648           Thermal Conductivity         0.23         W/m.°C         ASTM C177           Vicat Softening Temp, Rate A/50         240         °C         ISO 306           Vicat Softening Temp, Rate B/120         175         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         °C         ISO 306           HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm         175         °C         ISO 306           PHYSICAL         **         *STM D 792         **           Water Absorption, equilibrium, 23C         3.5         %         ASTM D 570           Water Absorption, 50% RH, equilib         1.99         %         ASTM D 570           Mold Shrinkage, flow         1.3         %         ASIC method           Mold Shrinkage, xflow         1.3         **         ASIC method           Melt Volume Rate, MVR at 280°C/2.16 kg         7         **         **         **           INJURY         **         **         **         **         **           Water Absorption, 50% RH, equilib         1.3         **         **         **         **         **         **         **         <	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eA
HDT, 0.45 MPa, 6.4 mm, unannealed185°CASTM D 648Thermal Conductivity0.23W/m.°CASTM C177Vicat Softening Temp, Rate A/50240°CISO 306Vicat Softening Temp, Rate B/50175°CISO 306Vicat Softening Temp, Rate B/120180°CISO 306HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm175°CISO 75/BePHYSICALSpecific Gravity1.08*ASTM D 792Water Absorption, equilibrium, 23C3.5%ASTM D 570Water Absorption, 50% RH, equilib1.19%ASTM D 570Mold Shrinkage, flow1.5%ASIM D 570Mold Shrinkage, flow1.3%ASIM D 570Melt Volume Rate, MVR at 280°C/2.16 kg7m²/10 minISO 1133INJECTION MOLDING5**Typing Temperature95-105°C*	Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	20	kJ/m²	ISO 179/1eA
Thermal Conductivity         0.23         W/m.°C         ASTM C177           Vicat Softening Temp, Rate A/50         240         °C         ISO 306           Vicat Softening Temp, Rate B/50         175         °C         ISO 306           Wicat Softening Temp, Rate B/120         180         °C         ISO 306           HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm         175         °C         ISO 306           PHYSICAL         **         **         STM D 79           Water Absorption, equilibrium, 23C         3.5         %         ASTM D 570           Water Absorption, 50% RH, equilib         1.19         %         ASTM D 570           Mold Shrinkage, flow         1.5         %         SABIC method           Mold Shrinkage, xflow         1.3         %         SABIC method           Melt Volume Rate, MVR at 280°C/2.16 kg         7         m³/10 min         ISO 1133           INJECTION MOLDING         **         **         **           Pring Temperature         95 - 105         **         **	THERMAL			
Vicat Softening Temp, Rate A/50         240         °C         ISO 306           Vicat Softening Temp, Rate B/50         175         °C         ISO 306           Vicat Softening Temp, Rate B/120         180         °C         ISO 306           HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm         175         °C         ISO 75/Be           PHYSICAL           Specific Gravity         1.08         -         ASTM D 792           Water Absorption, equilibrium, 23C         3.5         %         ASTM D 570           Water Absorption, 50% RH, equilib         1.19         %         ASTM D 570           Mold Shrinkage, xflow         1.3         %         ASBIC method           Mold Shrinkage, xflow         1.3         %         SABIC method           Melt Volume Rate, MVR at 280°C/2.16 kg         7         cm²/10 min         ISO 1133           INJECTION MOLDING           Drying Temperature         95 – 105         °C	HDT, 0.45 MPa, 6.4 mm, unannealed	185	°C	ASTM D 648
Vicat Softening Temp, Rate B/50  Vicat Softening Temp, Rate B/120  HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm  PHYSICAL  Specific Gravity  Specific Gravity  Mater Absorption, equilibrium, 23C  Mold Shrinkage, flow  Mold Shrinkage, flow  Mold Shrinkage, xflow  Mold Shrinkage, xf	Thermal Conductivity	0.23	W/m-°C	ASTM C177
Vicat Softening Temp, Rate B/120 HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm FHYSICAL  Specific Gravity Mater Absorption, equilibrium, 23C Mold Shrinkage, flow Mold Shrinkage, xflow Melt Volume Rate, MVR at 280°C/2.16 kg Mold Shrinkage	Vicat Softening Temp, Rate A/50	240	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm 175 °C ISO 75/Be  PHYSICAL  Specific Gravity 1.08 - ASTM D 792  Water Absorption, equilibrium, 23C 3.5 % ASTM D 570  Water Absorption, 50% RH, equilib 1.19 % ASTM D 570  Mold Shrinkage, flow 1.5 % SABIC method  Mold Shrinkage, xflow 1.3 % SABIC method  Melt Volume Rate, MVR at 280°C/2.16 kg 7.0 % SOBIC method  NUECTION MOLDING  Dying Temperature 95-105 °C  **C **C **C **C **C **C **C **C **C *	Vicat Softening Temp, Rate B/50	175	°C	ISO 306
PHYSICAL  Specific Gravity  Mater Absorption, equilibrium, 23C  Mold Shrinkage, flow  Mold Shrinkage, xflow  Mold	Vicat Softening Temp, Rate B/120	180	°C	ISO 306
Specific Gravity  Mater Absorption, equilibrium, 23C  Water Absorption, 50% RH, equilib  Mold Shrinkage, flow  Mold Shrinkage, xflow  Mol	HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	175	°C	ISO 75/Be
Water Absorption, equilibrium, 23C Water Absorption, 50% RH, equilib Mold Shrinkage, flow L3 Mold Shrinkage, xflow L3 Mol	PHYSICAL			
Water Absorption, 50% RH, equilib1.19%ASTM D 570Mold Shrinkage, flow1.5%SABIC methodMold Shrinkage, xflow1.3%SABIC methodMelt Volume Rate, MVR at 280°C/2.16 kg7cm³/10 minISO 1133INJECTION MOLDINGDrying Temperature95 – 105°C	Specific Gravity	1.08	-	ASTM D 792
Mold Shrinkage, flow 1.5 %ABIC method Mold Shrinkage, xflow 1.3 %ABIC method Melt Volume Rate, MVR at 280°C/2.16 kg 7 cm³/10 min 1SO 1133  NJECTION MOLDING  Drying Temperature 95 – 105 °C  SABIC method SABIC metho	Water Absorption, equilibrium, 23C	3.5	%	ASTM D 570
Mold Shrinkage, xflow 1.3 % SABIC method Melt Volume Rate, MVR at 280°C/2.16 kg 7 % cm³/10 min ISO 1133  INJECTION MOLDING  Drying Temperature 95 – 105	Water Absorption, 50% RH, equilib	1.19	%	ASTM D 570
Melt Volume Rate, MVR at 280°C/2.16 kg 7 cm³/10 min ISO 1133  INJECTION MOLDING  Drying Temperature 95 – 105 °C	Mold Shrinkage, flow	1.5	%	SABIC method
INJECTION MOLDING  Drying Temperature 95 – 105 °C	Mold Shrinkage, xflow	1.3	%	SABIC method
<b>Drying Temperature</b> 95 – 105 °C	Melt Volume Rate, MVR at 280°C/2.16 kg	7	cm³/10 min	ISO 1133
	INJECTION MOLDING			
Drying Time 3 – 4 hrs	Drying Temperature	95 – 105	°C	
	Drying Time	3 – 4	hrs	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.07	%	
Minimum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	295 – 315	°C	
Front - Zone 3 Temperature	290 – 315	°C	
Middle - Zone 2 Temperature	280 – 315	°C	
Rear - Zone 1 Temperature	275 – 315	°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	

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