



## **Americas: COMMERCIAL**

Lexan\* BPL1000 Polycarbonate (PC) resin is an injection moldable grade featuring high flow and good impact peroformance. It contains non-chlorinated and non-brominated flame retardant systems with UL-94 V0 rating at 0.8mm. Lexan BPL1000 resin offers various opaque color options and is ideal for thin wall applications.

## Property

MECHANICAL     Value     Unit     Standard       Tensile Stress, yild, Type I, 50 mm/min     63     MPa     ASTM D 638       Tensile Stress, brk, Type I, 50 mm/min     4.7     %     ASTM D 638       Tensile Stress, brk, Type I, 50 mm/min     96.3     %     ASTM D 638       Tensile Modulus, 5 mm/min     2670     MPa     ASTM D 638       Flexural Stress, yiel, 1.3 mm/min, 50 mm span     102     MPa     ASTM D 790       Flexural Modulus, 5 mm/min     64     MPa     ISO 527       Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Stress, yield, 50 mm/min     4.7     %     ISO 527       Tensile Modulus, 1 mm/min     96.8     %     ISO 527       Tensile Modulus, 1 mm/min     94.4     MPa     ISO 178       Flexural Stress, yield, 20 mm/min     2360     MPa     ISO 178       Flexural Modulus, 1 mm/min     2460     MPa     ISO 178       Tensile Modulus, 1 mm/min     2360     MPa     ISO 178       Flexural Modulus, 2 mm/min     14     MPa     ISO 178       Teav	TYPICAL PROPERTIES <sup>(1)</sup>			
Tensile Strass, brk, Type I, 50 mm/min     51     MPa     ASTM D 638       Tensile Strain, ydt, Type I, 50 mm/min     4.7     %     ASTM D 638       Tensile Strain, ydt, Type I, 50 mm/min     96.3     %     ASTM D 638       Tensile Modulus, 5 mm/min     96.3     %     ASTM D 638       Flexural Stress, yld, 1.3 mm/min, 50 mm span     102     MPa     ASTM D 790       Flexural Modulus, 5 mm/min     64     MPa     ISO 527       Tensile Strais, yleid, 50 mm/min     64     MPa     ISO 527       Tensile Strais, yleid, 50 mm/min     64     MPa     ISO 527       Tensile Strais, yleid, 50 mm/min     4.7     %     ISO 527       Tensile Strais, yleid, 2 mm/min     94     MPa     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Tensile Modulus, 2 mm/min     2360     MPa     ISO 178       Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, 30°C     NA     J/m     ASTM D 256	MECHANICAL	Value	Unit	Standard
Tensile Strain, yld, Type I, 50 mm/min     4.7     %     ASTM D 638       Tensile Strain, brk, Type I, 50 mm/min     96.3     %     ASTM D 638       Flexural Stress, yld, 1.3 mm/min, 50 mm span     102     MPa     ASTM D 638       Flexural Modulus, 5. mm/min, 50 mm span     102     MPa     ASTM D 790       Flexural Modulus, 5. mm/min, 50 mm span     2660     MPa     ASTM D 790       Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Stress, break, 50 mm/min     53     MPa     ISO 527       Tensile Strain, break, 50 mm/min     4.7     %     ISO 527       Tensile Strain, break, 50 mm/min     2460     MPa     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Flexural Stress, yield, 2 mm/min     94     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched 80°10°4 +23°C     17     KJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     KJ/m²     IS	Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min     96.3     %     ASTM D 638       Tensile Modulus, 5 mm/min     2870     MPa     ASTM D 638       Flexural Stress, yld, 1.3 mm/min, 50 mm span     102     MPa     ASTM D 790       Flexural Modulus, 1.3 mm/min, 50 mm span     2660     MPa     ASTM D 790       Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Strain, yield, 50 mm/min     4.7     %     ISO 527       Tensile Strain, yield, 50 mm/min     4.7     %     ISO 527       Tensile Strain, break, 50 mm/min     94.8     MPa     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Tensile Modulus, 2 mm/min     94     MPa     ISO 527       Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       IPMPACT     Value     Unit     Standard       Izod Impact, notched, 30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 2763       Izod Impact, notched 80*10*4 *23°C     17     KJ/m²     ISO 179/1eA  <	Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Modulus, 5 mm/min     2670     MPa     ASTM D 638       Flexural Stress, yid, 1.3 mm/min, 50 mm span     102     MPa     ASTM D 790       Flexural Modulus, 1.3 mm/min, 50 mm span     2660     MPa     ASTM D 790       Flexural Modulus, 1.3 mm/min, 50 mm span     2660     MPa     ASTM D 790       Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Stress, break, 50 mm/min     4.7     %     ISO 527       Tensile Strain, preak, 50 mm/min     96.8     %     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Tensile Modulus, 2 mm/min     94.4     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched 30°10°4 +23°C     17     k.J/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     k.J/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +39°C     17     k.J/m²     ISO 180/1A       Izod Impact, notched 80°10°4 sp=62mm     17     k.J/m²     ISO 1	Tensile Strain, yld, Type I, 50 mm/min	4.7	%	ASTM D 638
Flexural Stress, yild, 1.3 mm/min, 50 mm span     102     MPa     ASTM D 790       Flexural Modulus, 1.3 mm/min, 50 mm span     2660     MPa     ASTM D 790       Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Stress, break, 50 mm/min     53     MPa     ISO 527       Tensile Strain, yield, 50 mm/min     96.8     %     ISO 527       Tensile Strain, break, 50 mm/min     96.8     %     ISO 527       Tensile Strain, break, 50 mm/min     94.4     MPa     ISO 527       Tensile Stress, yield, 2 mm/min     94.4     MPa     ISO 178       Flexural Modulus, 1 mm/min     2360     MPa     ISO 178       Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     A60     J/m     ASTM D 256       Izod Impact, notched 80*10*4 +23°C     17     K.J/m²     ISO 180/1A       Zod Impact, notched 80*10*4 +23°C     17     K.J/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm     17     K.J/m²     ISO 180/1A </td <td>Tensile Strain, brk, Type I, 50 mm/min</td> <td>96.3</td> <td>%</td> <td>ASTM D 638</td>	Tensile Strain, brk, Type I, 50 mm/min	96.3	%	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span     2660     MPa     ASTM D 790       Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Stress, break, 50 mm/min     53     MPa     ISO 527       Tensile Strain, break, 50 mm/min     4.7     %     ISO 527       Tensile Strain, break, 50 mm/min     96.8     %     ISO 527       Tensile Modulus, 1 mm/min     94.8     %     ISO 527       Tensile Modulus, 2 mm/min     2460     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Istrumented Impact Total Energy, 23°C     48     J     ASTM D 256       Istrumented Impact Total Energy, 23°C     12     k.J/m2     ISO 180/1A       Izod Impact, notched 80°10'4 +23°C     17     k.J/m2     ISO 180/1A       Izod Impact, notched 80°10'4 sp=62mm     17     k.J/m2     ISO 180/1A       Izod Impact, notched 80°10'4 sp=62mm     17     k.J/m2     ISO 180/1A       Izod Impact, otched 80°10'4 sp=62mm     17     k.J/m2     ISO 180/1A <td>Tensile Modulus, 5 mm/min</td> <td>2670</td> <td>MPa</td> <td>ASTM D 638</td>	Tensile Modulus, 5 mm/min	2670	MPa	ASTM D 638
Tensile Stress, yield, 50 mm/min     64     MPa     ISO 527       Tensile Stress, break, 50 mm/min     53     MPa     ISO 527       Tensile Strain, yield, 50 mm/min     4.7     %     ISO 527       Tensile Strain, break, 50 mm/min     96.8     %     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Tensile Strain, break, 50 mm/min     94     MPa     ISO 527       Tensile Strain, break, 50 mm/min     2460     MPa     ISO 527       Tensile Strain, break, 50 mm/min     2460     MPa     ISO 527       Tensile Strain, break, 50 mm/min     2460     MPa     ISO 178       Flexural Modulus, 2 mm/min     2460     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80*10*4 +23°C     17     KJ/m2     ISO 180/1A       Izod Impact, notched 80*10*4 +23°C     17     KJ/m2     ISO 180/1A       Izo	Flexural Stress, yld, 1.3 mm/min, 50 mm span	102	MPa	ASTM D 790
Tensile Stress, break, 50 mm/min     53     MPa     ISO 527       Tensile Strain, yield, 50 mm/min     4.7     %     ISO 527       Tensile Boulus, 1 mm/min     966.8     %     ISO 527       Flexural Stress, yield, 2 mm/min     2460     MPa     ISO 527       Flexural Stress, yield, 2 mm/min     94     MPa     ISO 178       Flexural Modulus, 1 mm/min     2360     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, 30°C     NNA     J/m     ASTM D 256       Izod Impact, notched 80°10°4 +23°C     48     J     ASTM D 256       Izod Impact, notched 80°10°4 +23°C     17     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m2     ISO 179/1eA	Flexural Modulus, 1.3 mm/min, 50 mm span	2660	MPa	ASTM D 790
Tensile Strain, yield, 50 mm/min     4.7     %     ISO 527       Tensile Strain, break, 50 mm/min     96.8     %     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Flexural Stress, yield, 2 mm/min     94     MPa     ISO 57       Flexural Modulus, 2 mm/min     94     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, 30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80°10°4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +30°C     11     KJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +30°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +30°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +30°C     12     KJ/m²     ISO 180/1A <tr< td=""><td>Tensile Stress, yield, 50 mm/min</td><td>64</td><td>MPa</td><td>ISO 527</td></tr<>	Tensile Stress, yield, 50 mm/min	64	MPa	ISO 527
Tensile Strain, break, 50 mm/min     96.8     %     ISO 527       Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Flexural Stress, yield, 2 mm/min     94     MPa     ISO 178       Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80°10°4 + 23°C     17     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 + 23°C     12     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 + 23°C     12     kJ/m2     ISO 180/1A       Izod Impact, notched 80°10°4 - 30°C     12     kJ/m2     ISO 180/1A       Cad Impact, notched 80°10°4 - 43°C     12     kJ/m2     ISO 180/1A       Cad Impact, notched 80°10°4 - 43°C     12     kJ/m2     ISO 180/1A       Zood Impact, notched 80°10°4 - 43°C     12     kJ/m2     ISO 180/1A       Zood Impact, notched 80°10°4 - 43°C     12     kJ/m2     ISO 179	Tensile Stress, break, 50 mm/min	53	MPa	ISO 527
Tensile Modulus, 1 mm/min     2460     MPa     ISO 527       Flexural Stress, yield, 2 mm/min     94     MPa     ISO 178       Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       IMPACT     2360     MPa     ISO 178       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, 30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 256       Izod Impact, notched 80°10°4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 178/1A       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 178/1A       Izod Impact, notched 80°10°4 +23°C     17     kJ/m²     ISO 178/1A	Tensile Strain, yield, 50 mm/min	4.7	%	ISO 527
Flexural Stress, yield, 2 mm/min     94     MPa     ISO 178       Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, -30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80*10*4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 +23°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 sp=62mm     17     kJ/m²     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM D 53-2       GTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE,	Tensile Strain, break, 50 mm/min	96.8	%	ISO 527
Flexural Modulus, 2 mm/min     2360     MPa     ISO 178       IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, 30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     12     kJ/m²     ISO 180/1A       Cold mpact, notched 80°10°4 +23°C     12     kJ/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     17     kJ/m²     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 848       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, 40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2	Tensile Modulus, 1 mm/min	2460	MPa	ISO 527
IMPACT     Value     Unit     Standard       Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, -30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80*10*4 +23°C     17     KJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 +23°C     17     KJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 +23°C     17     KJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 +23°C     12     KJ/m²     ISO 180/1A       Value     Umit     Standard     ISO 180/1A       Volars 23°C, V-notch Edgew 80*10*4 sp=62mm     17     KJ/m²     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       DT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2	Flexural Stress, yield, 2 mm/min	94	MPa	ISO 178
Izod Impact, notched, 23°C     600     J/m     ASTM D 256       Izod Impact, notched, -30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80°10°4 +23°C     17     k.J/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +23°C     12     k.J/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +30°C     12     k.J/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     17     k.J/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     17     k.J/m²     ISO 180/1A       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       DT, 0.45 MPa, 3.2 mn, unannealed     105     °C     ASTM D 1525       DT, 0.45 MPa, 3.2 mn, unannealed     7.E-05     1/°C     ASTM D 1525       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05	Flexural Modulus, 2 mm/min	2360	MPa	ISO 178
Izod Impact, notched, -30°C     N/A     J/m     ASTM D 256       Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80*10*4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 +23°C     12     kJ/m²     ISO 180/1A       Izod Impact, notched 80*10*4 sp=62mm     17     kJ/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm     17     kJ/m²     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 1306       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 1359-2       Ball Pressure Test, 75°C +/- 2°C     PASS     -     IEC 60695	ІМРАСТ	Value	Unit	Standard
Instrumented Impact Total Energy, 23°C     48     J     ASTM D 3763       Izod Impact, notched 80°10°4 +23°C     17     kJ/m²     ISO 180/1A       Izod Impact, notched 80°10°4 +30°C     12     kJ/m²     ISO 180/1A       Charpy 23°C, V -notch Edgew 80°10°4 sp=62mm     17     kJ/m²     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       GTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       GTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       Ball Pressure Test, 75°C +/-2°C     PASS     -     IEC 60695-10-2       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm     96     °C     ISO	Izod Impact, notched, 23°C	600	J/m	ASTM D 256
Izod Impact, notched 80*10*4 +23°C     17     kJ/m2     ISO 180/1A       Izod Impact, notched 80*10*4 -30°C     12     kJ/m2     ISO 180/1A       Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm     17     kJ/m2     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 306       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       Vicat Softening Temp, Rate B/120     114     °C     ISO 306	Izod Impact, notched, -30°C	N/A	J/m	ASTM D 256
Izod Impact, notched 80*10*4 -30°C     12     kJ/m2     ISO 180/1A       Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm     17     kJ/m2     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       Ball Pressure Test, 75°C +/- 2°C     PASS     -     IEC 60695-10-2       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       Vicat Softening Temp, Rate B/120     114     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     96     °C     ISO 75/Af	Instrumented Impact Total Energy, 23°C	48	J	ASTM D 3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm     17     kJ/m2     ISO 179/1eA       THERMAL     Value     Unit     Standard       Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       Ball Pressure Test, 75°C +/- 2°C     PASS     -     IEC 60695-10-2       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       Vicat Softening Temp, Rate B/120     114     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     80     °C     UL 746B	Izod Impact, notched 80*10*4 +23°C	17	kJ/m²	ISO 180/1A
THERMALValueUnitStandardVicat Softening Temp, Rate B/50111°CASTM D 1525HDT, 0.45 MPa, 3.2 mm, unannealed105°CASTM D 648CTE, -40°C to 40°C, flow7.E-051/°CASTM E 831CTE, -40°C to 40°C, xflow7.E-051/°CASTM E 831CTE, -40°C to 40°C, flow7.E-051/°CISO 11359-2CTE, -40°C to 40°C, xflow7.E-051/°CISO 11359-2Vicat Softening Temp, Rate B/50112°CIBC 60695-10-2Vicat Softening Temp, Rate B/50114°CISO 306Vicat Softening Temp, Rate B/120114°CISO 306HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CUL 746BRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BPHYSICALValueUnitStandard	Izod Impact, notched 80*10*4 -30°C	12	kJ/m²	ISO 180/1A
Vicat Softening Temp, Rate B/50     111     °C     ASTM D 1525       HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       Ball Pressure Test, 75°C +/- 2°C     PASS     -     IEC 60695-10-2       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       Vicat Softening Temp, Rate B/120     114     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     96     °C     UL 746B       Relative Temp Index, Elec     80     °C     UL 746B       Relative Temp Index, Mech w/impact     80     °C     UL 746B	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	17	kJ/m²	ISO 179/1eA
HDT, 0.45 MPa, 3.2 mm, unannealed     105     °C     ASTM D 648       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       Ball Pressure Test, 75°C +/- 2°C     PASS     -     IEC 60695-10-2       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       Vicat Softening Temp, Rate B/120     114     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80°10*4 sp=64mm     96     °C     UL 746B       Relative Temp Index, Elec     80     °C     UL 746B       Relative Temp Index, Mech w/impact     80     °C     UL 746B	THERMAL	Value	Unit	Standard
CTE, -40°C to 40°C, flow   7.E-05   1/°C   ASTM E 831     CTE, -40°C to 40°C, xflow   7.E-05   1/°C   ASTM E 831     CTE, -40°C to 40°C, xflow   7.E-05   1/°C   ISO 11359-2     CTE, -40°C to 40°C, flow   7.E-05   1/°C   ISO 11359-2     CTE, -40°C to 40°C, xflow   7.E-05   1/°C   ISO 11359-2     CTE, -40°C to 40°C, xflow   7.E-05   1/°C   ISO 11359-2     CTE, -40°C to 40°C, xflow   7.E-05   1/°C   ISO 11359-2     Ball Pressure Test, 75°C +/- 2°C   PASS   -   IEC 60695-10-2     Vicat Softening Temp, Rate B/50   112   °C   ISO 306     Vicat Softening Temp, Rate B/120   114   °C   ISO 306     HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm   96   °C   ISO 75/Af     Relative Temp Index, Elec   80   °C   UL 746B     Relative Temp Index, Mech w/impact   80   °C   UL 746B     PHYSICAL   Value   Unit   Standard	Vicat Softening Temp, Rate B/50	111	°C	ASTM D 1525
CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ASTM E 831       CTE, -40°C to 40°C, flow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     7.E-05     1/°C     ISO 11359-2       Ball Pressure Test, 75°C +/- 2°C     PASS     -     IEC 60695-10-2       Vicat Softening Temp, Rate B/50     112     °C     ISO 306       Vicat Softening Temp, Rate B/120     114     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     96     °C     ISO 75/Af       Relative Temp Index, Elec     80     °C     UL 746B       Relative Temp Index, Mech w/impact     80     °C     UL 746B       PHYSICAL     Value     Unit     Standard	HDT, 0.45 MPa, 3.2 mm, unannealed	105	°C	ASTM D 648
CTE, -40°C to 40°C, flow7.E-051/°CISO 11359-2CTE, -40°C to 40°C, xflow7.E-051/°CISO 11359-2Ball Pressure Test, 75°C +/- 2°CPASS-IEC 60695-10-2Vicat Softening Temp, Rate B/50112°CISO 306Vicat Softening Temp, Rate B/120114°CISO 306HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CISO 75/AfRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BPHYSICALValueUnitStandard	CTE, -40°C to 40°C, flow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow7.E-051/°CISO 11359-2Ball Pressure Test, 75°C +/- 2°CPASS-IEC 60695-10-2Vicat Softening Temp, Rate B/50112°CISO 306Vicat Softening Temp, Rate B/120114°CISO 306HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CISO 75/AfRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
Ball Pressure Test, 75°C +/- 2°CPASS-IEC 60695-10-2Vicat Softening Temp, Rate B/50112°CISO 306Vicat Softening Temp, Rate B/120114°CISO 306HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CISO 75/AfRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	CTE, -40°C to 40°C, flow	7.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50112°CISO 306Vicat Softening Temp, Rate B/120114°CISO 306HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CISO 75/AfRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120114°CISO 306HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CISO 75/AfRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	Ball Pressure Test, 75°C +/- 2°C	PASS	-	IEC 60695-10-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm96°CISO 75/AfRelative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	Vicat Softening Temp, Rate B/50	112	°C	ISO 306
Relative Temp Index, Elec80°CUL 746BRelative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	Vicat Softening Temp, Rate B/120	114	°C	ISO 306
Relative Temp Index, Mech w/impact80°CUL 746BRelative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	96	°C	ISO 75/Af
Relative Temp Index, Mech w/o impact80°CUL 746BPHYSICALValueUnitStandard	Relative Temp Index, Elec	80	°C	UL 746B
PHYSICAL Value Unit Standard	Relative Temp Index, Mech w/impact	80	°C	UL 746B
	Relative Temp Index, Mech w/o impact	80	°C	UL 746B
Specific Gravity 1.16 - ASTM D 792	PHYSICAL	Value	Unit	Standard
	Specific Gravity	1.16	-	ASTM D 792

Mold Shrinkage on Tensile Bar, flow (2)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	25.2	g/10 min	ASTM D 1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.35	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	23	cm³/10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Dielectric Strength, in oil, 1.6 mm	27	kV/mm	ASTM D 149
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Relative Permittivity, 50/60 Hz	3	-	IEC 60250
Relative Permittivity, 1 MHz	2.9	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.03	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	200	V	IEC 60112
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-2 Flame Class Rating (3)	0.45	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	0.8	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	800	°C	IEC 60695-2-13
Oxygen Index (LOI)	36	%	ISO 4589
		Source GN	D, last updated:02/06/20

Processing

Parameter **Injection Molding** Value Unit Drying Temperature 90 °C Drying Time 4 hrs Maximum Moisture Content 0.02 % °С Melt Temperature 280 - 300 °C 270 - 290 Nozzle Temperature Front - Zone 3 Temperature 280 - 300 °C °C Middle - Zone 2 Temperature 270 - 290 260 - 280 °C Rear - Zone 1 Temperature Hopper Temperature 60 - 80 °C °C Mold Temperature 90

Source GMD, last updated:02/06/2004

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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