

## LNPTM ELCRINTM BD2031

## **DESCRIPTION**

LNP ELCRIN BD2031 is polycarbonate (PC) Bio base copolymer transparent resin, with medium flow, synthesized from Bio source. This resin offers excellent low temperature ductility (-30°C), UV stabilized, available for injection molding and extrusion process.

BD2031 resin is a product for a wide variety of applications, such as big size and thin wall applications, or transparent/lower birefringence needed applications.

GENERAL INFORMATION	
Features	UV-C resistant, Transparent/Translucent, Low temperature impact, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding, Extrusion

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Home Appliances
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Material Handling, Industrial General

## **TYPICAL PROPERTY VALUES**

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL (1)			
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	66	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D638
Tensile Modulus, 5 mm/min	2250	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	96	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2230	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	72	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	140	%	ISO 527
Tensile Modulus, 1 mm/min	2070	MPa	ISO 527
Flexural Strength, 2 mm/min	88	MPa	ISO 178
Flexural Modulus, 2 mm/min	2060	MPa	ISO 178
Hardness, Rockwell R	120	-	ASTM D785
IMPACT (1)			
Izod Impact, notched, 23°C	960	J/m	ASTM D256
Izod Impact, notched, -30°C	890	J/m	ASTM D256
Izod Impact, notched 80*10*3 +23°C	71	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	62	kJ/m²	ISO 180/1A



PROPERTIES     TYPICAL VALUES     UNITS     TEST METHODS       Izod Impact, unnotched 80°10°3 -30°C     N8     kJ/m²     50 180/1U       Charpy 23°C, Vnotch Edgew 80°10°3 sp=62mm     81     J/m²     150 179/1eA       Charpy 23°C, Vnotch Edgew 80°10°3 sp=62mm     68     J/m²     150 179/1eA       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     J/m²     150 179/1eU       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     J/m²     150 179/1eU       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     J/m²     150 179/1eU       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     J/m²     150 179/1eU       Instrumented Dart Impact Total Energy, 23°C     78     J/m²     150 6603       Multaxial Impact     133     J     150 6603       THERMAL <sup>10</sup> 50     60     ASTM D648       HDT, 142 MPa, 3,2mm, unannealed     114     °C     ASTM D648       HDT, 142 MPa, 3,2mm, unannealed     115     °C     ASTM D648       CTE, 40°C to 40°C, flow     8.605     1/r°C     ASTM D648       CTE, 40°C to 40°C, flow     8.605 <td< th=""></td<>
Izod Impact, unnotched 80°10°3 sp°62mm     NB     kl/m²     SO 180/1U       Charpy 23°C, Vnotch Edgew 80°10°3 sp°62mm     81     kl/m²     SO 179/1eA       Charpy 23°C, Unnotch Edgew 80°10°3 sp°62mm     88     kl/m²     SO 179/1eU       Charpy 23°C, Unnotch Edgew 80°10°3 sp°62mm     NB     kl/m²     SO 179/1eU       Charpy 30°C, Unnotch Edgew 80°10°3 sp°62mm     NB     kl/m²     SO 179/1eU       Instrumented Dart Impact Total Energy, 23°C     78     J     SOT 500       Multiaxial Impact     133     J     SO 500       HDT, 0.45 MPa, 3.2 mm, unannealed     125     °C     ASIM D648       HDT, 1.82 MPa, 3.2 mm, unannealed     114     °C     ASIM D648       HDT, 1.82 MPa, 3.2 mm, unannealed     115     °C     ASIM D648       TEE, 40°C to 40°C, flow     8.605     1°C     ASIM D648       CTE, 40°C to 40°C, flow     8.605     1°C     ASIM D648       CTE, 40°C to 40°C, flow     8.605     1°C     ASIM D648       CTE, 40°C to 40°C, flow     8.605     1°C     ASIM D648       CTE, 40°C to 40°C, flow     8.605     1°C
Charpy 23°C, Vnotch Edgew 80°10°3 sp=62mm     81     kJ/m²     SO 179/1eA       Charpy 30°C, Vnotch Edgew 80°10°3 sp=62mm     88     kJ/m²     SO 179/1eA       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     kJ/m²     SO 179/1eU       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     J     SO 179/1eU       Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     J     ASTM D3763       Multaxial Impact     78     J     ASTM D3763       Multaxial Impact     133     J     SO 6603       HOT, 454 MPa, 3.2 mm, unannealed     125     °C     ASTM D648       HDT1, 1.2 kJMPa, 3.2 mm, unannealed     114     °C     SO 75/A¹       HDT1, 41.3 kJMPa Flatuw 80°10°4 sp=64mm     115     °C     SO 75/A¹       CFE, 40°C to 40°C, 160w     8.605     1/°C     ASTM D648       CFE, 40°C to 40°C, 160w     8.605     1/°C     ASTM E831       CFE, 40°C to 40°C, 160w     8.605     1/°C     ASTM D1359-2       Vicat Softening Temp, Rate B/50     13     °C     ASTM D1525       Vicat Softening Temp, Rate B/120     10     °C
Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm     68     kJ/m²     ISO 179/1eA       Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm     NB     kJ/m²     ISO 179/1eU       Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm     NB     kJ/m²     ISO 179/1eU       Instrumented Dart Impact Total Energy, 23°C     78     J     SO 6003       Multiaxial Impact     133     2     BO 6003       THERMAL <sup>(1)</sup> V     C     ASTM D648       HDT, 0.45 MPa, 3.2 mm, unannealed     114     °C     ASTM D648       HDT, 1.82 MPa, 3.2 mm, unannealed     116     °C     ASTM E814       HDT, 1.82 MPa, 3.2 mm, unannealed     116     °C     ASTM D648       HDT, 1.82 MPa, 3.2 mm, unannealed     116     °C     ASTM E814       HDT, 1.82 MPa, 3.2 mm, unannealed     116     °C     ASTM E814       CTE, 40°C to 40°C, flow     8.E05     1/°C     ASTM E814       CTE, 40°C to 40°C, flow     8.E05     1/°C     ASTM E814       Vicat Softening Temp, Rate B/50     330     °C     ASTM D1529       Vicat Softening Temp, Rate B/120     130     °C     ISO 30
Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm     N8     Id/m²     ISO 179/1eU       Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm     N8     Id/m²     ISO 179/1eU       Instrumented Dart Impact Total Energy, 23°C     78     J     ASTM D3763       Multiaxial Impact     133     13     16     S6603       HDT, 0.45 MPa, 3.2 mm, unannealed     125     °C     ASTM D648       HDT, 1.82 MPa, 3.2mm, unannealed     114     °C     ASTM D648       HDT, 1.82 MPa, 3.2mm, unannealed     115     °C     ASTM D648       HDT, 1.82 MPa, 3.2mm, unannealed     116     °C     ASTM D648       HDT/AL, 1.8 MPa Flatw 80°10°4 sp=64mm     115     °C     ASTM D648       CTE, 40°C to 40°C, flow     8.E05     1/°C     ASTM E831       CTE, 40°C to 40°C, flow     8.E05     1/°C     BO 11359-2       CTE, 40°C to 40°C, flow     8.E05     1/°C     ASTM D632       Vicat Softening Temp, Rate B/50     135     °C     ASTM D648       Vicat Softening Temp, Rate B/120     31     °C     ISO 306       Relative Temp Index, Elec (°)     15     °C
Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm     NB     kl/m²     SO 179   1eU       Instrumented Dart Impact Total Energy, 23°C     78     J     ASTM D3763       Multiaxial Impact     133     J     Iso 6603       THERMALIO     "     ************************************
Instrumented Dart Impact Total Energy, 23°C     78     J     ASTM D3763       Multiaxial Impact     133     J     150 6603       THERMAL************************************
Multiaxial Impact     133     J     50 6603       THERMAL. <sup>11</sup> HDT, 0.45 MPa, 3.2 mm, unannealed     125     °C     ASTM D648       HDT, 1.82 MPa, 3.2mm, unannealed     114     °C     ASTM D648       HDT, 1.8.2 MPa, 3.2mm, unannealed     115     °C     ASTM D648       HDT/A, 1.8 MPa Flatw 80*10*4 sp=64mm     115     °C     ASTM D648       CTE, 40°C to 40°C, tofow     8.E05     1/°C     ASTM E831       CTE, 40°C to 40°C, xflow     8.E05     1/°C     S0 11359-2       CTE, 40°C to 40°C, xflow     8.E05     1/°C     S0 11359-2       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     131     °C     S0 306       Vicat Softening Temp, Rate B/50     131     °C     S0 306       Ball Pressure Test, 125°C +/-2°C     105     °C     U.7 468       Relative Temp Index, Mech w/ impact <sup>[2]</sup> 105     °C     U.7 468       Relative Temp Index, Mech w/ impact <sup>[2]</sup> 12     °C     ASTM D792       Physickl. <sup>11</sup> 2     C     AS
THERMAL (**)     C**     ASTM D648       HDT, 0.45 MPa, 3.2 mm, unannealed     114     °C     ASTM D648       HDT, 1.82 MPa, 3.2 mm, unannealed     114     °C     ASTM D648       HDT, 1.8 MPa Flatw 80*10*4 sp=64mm     115     °C     ISO 75/Af       CTE, 40°C to 40°C, flow     8.E05     1/°C     ASTM E831       CTE, 40°C to 40°C, flow     8.E05     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.E05     1/°C     SO 11359-2       CTE, 40°C to 40°C, flow     1.5     °C     ASTM E831       CTE, 40°C to 40°C, flow     1.5     °C     OS 11359-2       CTE, 40°C to 40°C, flow     1.5     °C     ASTM D1525       CTE, 40°C to 40°C, flow     1.5     °C     ASTM D1525       CTE, 40°C to 40°C, flow     1.5     °C     ASTM D1525       CTE, 40°C to 40°C, flow     1.5     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/120     131     °C     U.7468       Relative Temp Index, Elec (°2)     105 <t< td=""></t<>
HDT, 0.45 MPa, 3.2 mm, unannealed     125     °C     ASTM D648       HDT, 1.82 MPa, 3.2 mm, unannealed     114     °C     ASTM D648       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     115     °C     ISO 75/Af       CTE, 40°C to 40°C, flow     8.605     1/°C     ASTM E831       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, flow     8.60     8.605     1/°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     130     8.60     1     1     1     1     1     1     1     1
HDT, 1.82 MPa, 3.2mm, unannealed     114     °C     ASTM D648       HDT/Af, 1.8 MPa Flatux 80°10°4 sp=64mm     115     °C     ISO 75/Af       CTE, -40°C to 40°C, flow     8.605     1/°C     ASTM E831       CTE, -40°C to 40°C, flow     8.605     1/°C     ASTM E831       CTE, -40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, -40°C to 40°C, flow     8.605     1/°C     ASTM D1525-2       CTE, -40°C to 40°C, flow     8.605     1/°C     ASTM D1529-2       CTE, -40°C to 40°C, flow     8.605     1/°C     ASTM D1529-2       CTE, -40°C to 40°C, flow     8.605     1/°C     ASTM D1529-2       Vicat Softening Temp, Rate B150     130     °C     ASTM D1525-2       Vicat Softening Temp, Rate B150     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     °C     U.746B       Relative Temp Index, Etec (°)     105     °C     U.746B       Relative Temp Index, Mech w/o impact (°)     12     °C     ASTM D792
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     115     °C     ISO 75/Af       CTE, 40°C to 40°C, flow     8.605     1/°C     ASTM E831       CTE, 40°C to 40°C, xflow     8.605     1/°C     ASTM E831       CTE, 40°C to 40°C, xflow     8.605     1/°C     ISO 11359-2       CTE, 40°C to 40°C, xflow     8.605     1/°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Mech w/impact (2)     105     °C     UL 7468       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 7468       Relative Temp Index, Mech w/o impact (2)     1.2     S     S       Specific Gravity     1.2     S     ASTM D792       Density     1.2     S     S     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62-1       Water Absorption, (23°C / 50% RH)     0.3     S     ISO 62-1 <tr< td=""></tr<>
CTE, 40°C to 40°C, flow     8E.05     1/°C     ASTM E831       CTE, 40°C to 40°C, xflow     8E.05     1/°C     ASTM E831       CTE, 40°C to 40°C, xflow     8E.05     1/°C     ISO 11359-2       CTE, 40°C to 40°C, xflow     8E.05     1/°C     ISO 1359-2       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     130     °C     ISO 306       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     ICC 60695-10-2       Relative Temp Index, Mech w/impact (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)     **     **     ASTM D792       Density     1.2     9/cm³     SO 62-1       Water Absorption (23°C/50% RH)     0.15     8
CTE, 40°C to 40°C, xflow     8.E.05     11°C     ASTM E831       CTE, 40°C to 40°C, xflow     8.E.05     11°C     ISO 11359-2       CTE, 40°C to 40°C, xflow     8.E.05     11°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     130     °C     ISO 306       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     EC 60695-10-2       Relative Temp Index, Elec (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)     *C     UL 746B       PHYSICAL (1)     *C     ASTM D792       Density     1.2     SO /C     ASTM D792       Density     1.2     \$C     ASTM D792       Density     1.2     \$C     SO 1183       Moisture Absorption (23°C/ 50% RH)     0.15     \$C     SO 62-1       Water Absorption, (23°C/saturated)     0.3     ASTM D1238       Melt Flow
CTE, -40°C to 40°C, flow     8.605     1/°C     ISO 11359-2       CTE, -40°C to 40°C, xflow     8.605     1/°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     130     °C     ISO 306       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Elec (2)     105     °C     UL 746B       Relative Temp Index, Mech w/impact (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)     **     UL 746B       PED ceptific Gravity     1.2     ASTM D792       Density     1.2     9/cm³     ASTM D792       Density     1.2     \$     ISO 62       Water Absorption (23°C / 50% RH)     0.15     %     ISO 62-1       Water Absorption (23°C / 50% RH)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     9/10 min
CTE, -40°C to 40°C, xflow     8.6-05     1/°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     130     °C     ISO 306       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/-2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Elec (2)     105     °C     UL 746B       Relative Temp Index, Mech w/impact (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)     **     **     ASTM D792       Density     1.2     9/cm³     ASTM D792       Density     1.2     9/cm³     ASTM D792       Density     1.2     9/cm³     ISO 1183       Moisture Absorption (23°C/50% RH)     0.15     %     ISO 62-1       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     (20     Cm³/10 min     ISO 1133
Vicat Softening Temp, Rate B/50     135     °C     ASTM D1525       Vicat Softening Temp, Rate B/50     130     °C     ISO 306       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Elec <sup>(2)</sup> 105     °C     UL 746B       Relative Temp Index, Mech w/impact <sup>(2)</sup> 105     °C     UL 746B       Relative Temp Index, Mech w/o impact <sup>(2)</sup> 105     °C     UL 746B       PHYSICAL <sup>(1)</sup> °C     UL 746B     C       PHYSICAL <sup>(1)</sup> °C     ASTM D792     C       Density     1.2     9/cm³     ASTM D792     C       Woltzer Absorption (23°C / 50% RH)     0.15     %     SO 62 </td
Vicat Softening Temp, Rate B/50     130     °C     ISO 306       Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Elec (²)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (²)     105     °C     UL 746B       PHYSICAL (¹)     °C     UL 746B       PHYSICAL (¹)     °C     ASTM D792       Density     1.2     9/cm³     ASTM D792       Density     1.2     9/cm³     ASTM D792       Moisture Absorption (23°C / 50% RH)     0.15     %     S0 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     9/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Vicat Softening Temp, Rate B/120     131     °C     ISO 306       Ball Pressure Test, 125°C +/- 2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Elec (2)     105     °C     UL 746B       Relative Temp Index, Mech w/nimpact (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)     **     UL 746B       PhySICAL (1)     **     ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62-1       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Ball Pressure Test, 125°C +/- 2°C     PASS     -     IEC 60695-10-2       Relative Temp Index, Elec (²)     105     °C     UL 746B       Relative Temp Index, Mech w/impact (²)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (²)     105     °C     UL 746B       PHYSICAL (¹)     **     ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Relative Temp Index, Elec (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)     **     **     ASTM D792       Specific Gravity     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62·1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Relative Temp Index, Mech w/impact (2)     105     °C     UL 746B       PHYSICAL (1)       Specific Gravity     1.2     -     ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ASTM D792       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)       Specific Gravity     1.2     -     ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 6183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Relative Temp Index, Mech w/o impact (2)     105     °C     UL 746B       PHYSICAL (1)       Specific Gravity     1.2     -     ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 6183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
PHYSICAL (1)       Specific Gravity     1.2     - ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Specific Gravity     1.2     -     ASTM D792       Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
Density     1.2     g/cm³     ASTM D792       Density     1.2     g/cm³     ISO 1183       Moisture Absorption (23°C / 50% RH)     0.15     %     ISO 62       Water Absorption, (23°C/saturated)     0.3     %     ISO 62-1       Melt Flow Rate, 300°C/1.2 kgf     7.5     g/10 min     ASTM D1238       Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
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Melt Volume Rate, MVR at 300°C/1.2 kg     6.5     cm³/10 min     ISO 1133
3.7
OPTICAL (1)
Light Transmission, 2.54 mm 88 % ASTM D1003
Haze, 2.54 mm < 1
Refractive Index     1.581     -     ASTM D542
FLAME CHARACTERISTICS <sup>(2)</sup>
UL Yellow Card Link <u>E207780-104559498</u>
UL Recognized, 94HB Flame Class Rating ≥0.8 mm UL 94
INJECTION MOLDING (4)
Drying Temperature 105 – 110 °C
Drying Time 3 – 4 Hrs
Drying Time (Cumulative) 24 Hrs



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Front - Zone 3 Temperature	260 – 305	°C	
Middle - Zone 2 Temperature	250 – 295	°C	
Rear - Zone 1 Temperature	240 – 280	°C	
Mold Temperature	50 – 80	°C	
Back Pressure	0.3 - 0.7	MPa	
Screw Speed	35 – 75	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.038 - 0.076	mm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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