

## LNPTM COLORCOMPTM COMPOUND D10008P

## **DESCRIPTION**

LNP COLORCOMP D10008P compound is based on Polycarbonate (PC) resin. Added features of this grade include: Flame Retardant, Exceptional Processing.

GENERAL INFORMATION	
Features	Flame Retardant, High Flow, Aesthetics/Visual effects, Non Cl/Br flame retardant
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Home Decoration, Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Flectrical and Flectronics	Mobile Phone - Computer - Tablets

## **TYPICAL PROPERTY VALUES**

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL (1)			
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	70	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D638
Tensile Modulus, 50 mm/min	2370	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790
Hardness, Rockwell M	70	-	ASTM D785
Hardness, Rockwell R	118	-	ASTM D785
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	ASTM D1044
IMPACT (1)			
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A



Root Impact, unnotched, 23°C   640   11	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C   100	Izod Impact, unnotched 80*10*4 +23°C	NA	kJ/m²	ISO 180/1U
Intent   I	Izod Impact, unnotched 80*10*4 -30°C	NA	kJ/m²	ISO 180/1U
Penille impact Strength, Type 5   378   169   1   ASIM 10322     Palling Dart Impact Cin 2029 1.2°C   54   169   1   ASIM 10363     Palling Dart Impact Cin 1020 1.2°C   54   169   169   160   160   160   160     Palling Dart Impact Cinergy @eak 23°C   54   160   160   160   160   160     Palling Dart Impact Cinergy @eak 23°C   54   160   160   160   160   160   160     Palling Dart Impact Cinergy @eak 23°C   54   160	Izod Impact, notched, 23°C	640	J/m	ASTM D256
Palling Dark Impact (0 3029), 23°C   169   1	Izod Impact, notched (natural, tints)	640	J/m	ASTM D256
Intox unmented Dart impact Energy @ peak, 23°C         54         J         ASTM D4812           Bod Impact, unmorbited, 23°C         3704         J/m         ASTM D4812           HDT JREA, LINE         T         SO 75 /Be           HDT JRE, 0.45 MPB Edgew 120°10°4 sp=100mm         133         °C         SO 75 /Be           HDT JRE, 1.8 MPB Edgew 120°10°4 sp=100mm         121         °C         SO 306           Vicas Softening Temp, Rate 4/50         139         °C         SO 306           Vicas Softening Temp, Rate 8/120         140         °C         SO 306           Vicas Softening Temp, Rate 8/130         140         °C         SO 306           Vicas Softening Temp, Rate 8/130         140         °C         SO 306           Vicas Softening Temp, Rate 8/130         140         °C         SO 306           Michael Soll Cristian         1,40         °C         SO 302           CET, 4,27°C to 80°C, flow         7,40         Jl°         SO 802           Ball Pressure Test, 1,25°C+1,2°C         PASSIS         -         K         K         SO 45648           HDT, 1,42 MPa, 6,4 mm, unannealed         137         C         ASTM C151         SO 45648           HDT, 1,45 MPa, 6,4 mm, unannealed         1,25         Jl°	Tensile Impact Strength, Type S	378	kJ/m²	ASTM D1822
Name	Falling Dart Impact (D 3029), 23°C	169	J	ASTM D3029
THERMAL. <sup>19</sup> THERMAL. <sup>19</sup> C         ISO 75/9e           HDT/Re, 0.45MPa Edgew 120°10°4 sp=100mm         132         °C         ISO 75/9e           HDT/Re, 1.8 MPa Edgew 120°10°4 sp=100mm         121         °C         ISO 306           Vicat Softening Temp, Rate 4)50         145         °C         ISO 306           Vicat Softening Temp, Rate 8)120         140         °C         ISO 306           Vicat Softening Temp, Rate 8)120         140         °C         ISO 306           Themal Conductivity         0.2         Mim²C         ISO 8302           CTE, 23°C to 80°C, flow         7.80°S         1/°C         ISO 11359-2           Ball Pressure Test, 125°C+7.2°C         PASSIS         -         IEC 60695-102           Ball Pressure Test, 125°C+7.2°C         ASTM D648         -         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D6	Instrumented Dart Impact Energy @ peak, 23°C	54	J	ASTM D3763
NDT/Be. 0.45MPa Edgew 120*10*4 sp=100mm         133         °C         BO 75/8e           HDT/Ae. 1.8 MPa Edgew 120*10*4 sp=100mm         121         °C         BO 75/8e           Wicat Softening Temp. Rate 8/150         139         °C         BO 306           Vicat Softening Temp. Rate 8/120         140         °C         BO 306           Thermal Conductivity         0.2         M/m*C         BO 300           CTE. 23*°C so 80°C, flow         7.695         1/°C         BO 11359-2           Ball Pressure Text. 125*°C+7-2*°C         PASSES         -         LEC 60095-10-2           HDT, 1.82 MPa, 3.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           LDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           LDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           LDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           LDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           LDT, 1.82 MPa, 6.4 mm, unannealed         126         ASTM D64	Izod Impact, unnotched, 23°C	3204	J/m	ASTM D4812
HDT/Ae, 1.8 MPa Egigew 120*10*4 sp=100mm         121         "C         ISO 350A           Vicat Softening Temp, Rate 8/50         145         "C         ISO 306           Vicat Softening Temp, Rate 8/50         139         "C         ISO 306           Tiveat Softening Temp, Rate 8/120         140         "C         ISO 306           Thermal Conductivity         0.2         W/m**C         ISO 8302           CTE, 23°C to 80°C, flow         7.60         11°C         ISO 1399-2           Ball Pressure Tat, 125°C + 2°C         MSSIS         -         4C 6085+10-2           HDT, 1.82 MPa, 3.2mm, unannealed         126         "C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         "C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         "C         ASTM D648           CTE, 40°C to 99°C, flow         6.844-05         11°C         ASTM C7           Specific Heat         1.25         1/g°C         ASTM C7           Relative Temp Index, Mech w// impact (**)         130         "C         U.7468           Relative Temp Index, Mech w// impact (**)         30         "C         U.7468           Relative Temp Index, Mech w// impact (**)         30         "C         U.7468	THERMAL (1)			
Vicat Softening Temp, Rate #/50         145         "C         ISO 306           Vicat Softening Temp, Rate #/50         139         "C         ISO 306           Vicat Softening Temp, Rate #/50         140         "C         ISO 306           The mal Conductivity         0.2         Wjm"*C         ISO 308           CTE, 25°C to 80°C, flow         76.05         1,1°C         ISO 11359-2           Ball Pressure Text, 125°C + 2°C         PKSS         -         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         125         1/g"C         ASTM D648           FCE, 4.0°C to 95°C, flow         6.84 E05         1/g"C         ASTM C31           Specific Page Text         130         "C         U.7468           Relative Temp Index, Bec *** In the properties*         130         "C         U.7468           Relative Temp Index, Mech w/Impact *** In the properties*         2         "Cm*/10 min         SO 133           Relative Temp Index, Mech w/Impact *** In the properties*         2         "Cm	HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	133	°C	ISO 75/Be
Vicat Softening Temp, Rate B/120         139         °C         ISO 306           Vicat Softening Temp, Rate B/120         140         °C         ISO 306           Thermal Conductivity         0.2         W/m.**C         ISO 306           CTE, 23°C to 80°C, flow         7,E05         1/°         ISO 31399-2           Ball Pressure Test, 125°C +/- 2°C         PMSSS         -         ICC 60695-10-2           HDT, 182 MPa, 3,2mm, unannealed         126         °C         ASTM 0648           HDT, 182 MPa, 6,4 mm, unannealed         126         °C         ASTM 0648           HDT, 182 MPa, 6,4 mm, unannealed         126         °C         ASTM 0648           HDT, 182 MPa, 6,4 mm, unannealed         126         °C         ASTM 1831           CEL, 40°C to 95°C, flow         6.844.05         1/°C         ASTM 1831           Specific Heat         1,25         Jlg or         ASTM 1831           Thermal Conductivity         0.19         W/m.**         ASTM 177           Relative Temp Index, Mech w/limpact <sup>(D)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/limpact <sup>(D)</sup> 23         cm²/10 min         SO 1133           Specific Cravity         1.2         .         ASTM 0792 <td< td=""><td>HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm</td><td>121</td><td>°C</td><td>ISO 75/Ae</td></td<>	HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	121	°C	ISO 75/Ae
Vicat Softening Temps, Rate il J 120         140         °C         ISO 306           Thermal Conductivity         0.2         W/m²C         ISO 8302           CTE, 23°C to 80°C, flow         7.605         11°C         ISO 11359-2           Ball Pressure Fist, 125°C +/- 2°C         PMSSS         -         IC CASTIM D648           BDT, 1.82 MPa, 3.2mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           LDT, 40°C to 95°C, flow         6.84C9S         11°C         ASTM C81           Specific Heat         1.25         1/g°C         ASTM C951           Relative Temp Index, Men wilmpact (°)         3.19         °C         UL 7468           Relative Temp Index, Mech wilmpact (°)         130         °C         UL 7468           Relative Temp Index, Mech wilmpact (°)         23         cm³/10 min         SO 1133 <td>Vicat Softening Temp, Rate A/50</td> <td>145</td> <td>°C</td> <td>ISO 306</td>	Vicat Softening Temp, Rate A/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/120         140         °C         ISO 306           Thermal Conductivity         0.2         W/m.°C         ISO 8302           CTE, 23°C to 80°C, flow         7.605         11°C         ISO 1359-2           Ball Pressure Test, 125°C + 1-2°C         MSSIS         -         EC 6059-10-2           HDT, 1.82 MPa, 3.2mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         1.26         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         1.26         °C         ASTM C18           FLEGH, 40°C to 95°C, flow         6.84 E05         1/g°C         ASTM C18           Specific Heat         1.25         Jlg °C         ASTM C177           Relative Temp Index, Belec <sup>10</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/jo inpact (°)         130         °C         U. 7468           Relative Temp Index, Mech w/jo inpact (°)         12         cm²/10 min         SO 1133           Relative Temp Index, Mech w/jo inpact (°)         23         cm²/10 min         SO 1133           Specific Gravity         1.2         cm²/10 min         SO 1133 <td>Vicat Softening Temp, Rate B/50</td> <td>139</td> <td>°C</td> <td>ISO 306</td>	Vicat Softening Temp, Rate B/50	139	°C	ISO 306
Thermal Conductivity         0.2         W/m.°C         ISO 8302           CTC. 22°C to 80°C, flow         7.605         1/°C         80 11359-2           Ball Pressure Test, 125°C +/- 2°C         MSSES         °C         LIC 60695-10-2           HDT, 1.82 MPa, 3.2mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           CTC, 40°C to 95°C, flow         6.84€.05         1/g°C         ASTM C31           Specific Heat         1.25         //g°C         ASTM C31           Thermal Conductivity         0.19         W/m.°C         ASTM C177           Relative Temp Index, Elec C°         130         °C         U.746B           Relative Temp Index, Mech w/impact C°         130         °C         U.746B           Relative Temp Index, Mech w/o impact C°         130         °C         U.746B           PHYSICAL **         **         U.746B         **           Specific Gravity         1.2         **         ASTM D792           Specific Gravity         1.19         g/cm²         ASTM D792           Water Absorption, (23°C/24hrs)         0		140	°C	ISO 306
Ball Pressure Test, 125°C +/- 2°C         PASSES         -         IEC 60695-10-2           HDT, 1.82 MPa, 3.2mm, unannealed         126         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           CTE, 40°C to 95°C, flow         6.84€05         11°C         ASTM E331           Specific Heat         1.25         11/9°C         ASTM C351           Thermal Conductivity         0.19         W/m°C         ASTM C177           Relative Temp Index, Elec <sup>(2)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/impact <sup>(2)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/impact <sup>(2)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         U. 7468           Physical <sup>(1)</sup> 4         5         5         5         5         5         133         6         133         6         <		0.2	W/m-°C	ISO 8302
HDT, 1.82 MPa, 3.2mm, unannealed         126         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM E831           Specific Velove         6.84E-05         1]g °C         ASTM E331           Specific Heat         1.25         Jg g °C         ASTM C151           Thermal Conductivity         0.19         W/m °C         ASTM C177           Relative Temp Index, Kleck Piloripote, Flec (a)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (a)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (a)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (a)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (a)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (a)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (a)         23         cm³10 min         S01133           Specific Gravity         1.19         9(cm³3         ASTM D7	CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           CTE, 40°C to 95°C, flow         6.84€05         1/°C         ASTM C351           Specific Heat         1.25         1/g °C         ASTM C351           Thermal Conductivity         0.19         W/m °C         ASTM C177           Relative Temp Index, Elec <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>[2]</sup> 130         °C         UL 7468           Physical Mine Mine Mine Mine Mine Mine Mine Mine		PASSES	-	IEC 60695-10-2
HDT, 1.82 MPa, 6.4 mm, unannealed         126         °C         ASTM D648           CTE, -40°C to 95°C, flow         6.84E-05         1/°C         ASTM E831           Specific Heat         1.25         1/g°C         ASTM C351           Thermal Conductivity         0.19         W/m°C         ASTM C177           Relative Temp Index, Elec <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 30         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 23         cm³/10 min         ISO 1133           Specific Volume         0.83         cm³/10 min         ASTM D792           Density         1.19         g/cm³         ASTM D570           Water Absorption, (23°C/24brs)         0.15         %         ASTM D570	·	126	°C	ASTM D648
CTE. 40°C to 95°C, flow         6.848-05         1/°C         ASTM E831           Specific Heat         1.25         1/g°C         ASTM C351           Thermal Conductivity         0.19         W/m°C         ASTM C177           Relative Temp Index, Elec (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         130         °C         U.746B           Relative Temp Index, Mech w/ impact (²)         23         cm² / 10 min         ISO 1133           Specific Cravity         1.2         -         ASTM D792           Specific Gravity         1.19         g/ cm³ / 3         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, 23°C/25 saturated)         0.5 – 0.7         %         ASTM D123 <td>HDT, 0.45 MPa, 6.4 mm, unannealed</td> <td>137</td> <td>°C</td> <td>ASTM D648</td>	HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D648
Specific Heat         1.25         I/g °C         ASTM C351           Thermal Conductivity         0.19         W/m °C         ASTM C177           Relative Temp Index, Elec <sup>(2)</sup> 130         °C         UL 746B           Relative Temp Index, Mech w/impact <sup>(2)</sup> 130         °C         UL 746B           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 746B           PHYSICAL <sup>(1)</sup> Welt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         ASTM D792         ASTM D792           Density         1.19         g/cm²         ASTM D792           Water Absorption, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1038           Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 8         ASTM D103           Melt Flow Rate, 300°C/1.2 kgf         8         ASTM D1003           DPTICAL <sup>(1)</sup> Uight Transmission, 2.54 mm         8         %         ASTM D1003           Refractive Index         1.58	HDT, 1.82 MPa, 6.4 mm, unannealed	126	°C	ASTM D648
Thermal Conductivity         0.19         W/m.°C         ASTM C177           Relative Temp Index, Elec (²)         130         °C         UL 746B           Relative Temp Index, Mech w/impact (²)         130         °C         UL 746B           Relative Temp Index, Mech w/o impact (²)         130         °C         UL 746B           PHYSICAL (¹)           Welt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.59         %         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (³)         0.5 – 0.7         %         ASTM D103           Melt Transmission, 2.54 mm         8         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         2 <td>CTE, -40°C to 95°C, flow</td> <td>6.84E-05</td> <td>1/°C</td> <td>ASTM E831</td>	CTE, -40°C to 95°C, flow	6.84E-05	1/°C	ASTM E831
Relative Temp Index, Elec <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/Impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 7468           PHYSICAL <sup>(1)</sup> Melt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         - ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D570           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.59         g/10 min         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D103           Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.5 – 0.7         %         ASTM D103           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         .         ASTM D542           ELECTRICAL <sup>(1)</sup> Volume Resistivity         1.4.9         KV/mm <td>Specific Heat</td> <td>1.25</td> <td>J/g-°C</td> <td>ASTM C351</td>	Specific Heat	1.25	J/g-°C	ASTM C351
Relative Temp Index, Beck <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/ Impact <sup>(2)</sup> 130         °C         UL 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         UL 7468           PHYSICAL <sup>(1)</sup> Welt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         - ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5-0.7         g/10 min         ASTM D103           Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.5-0.7         SABIC method           DOTICAL         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         %         ASTM D1003           Refractive Index         1.5417         Q.cm         ASTM D57	•	0.19	, -	ASTM C177
Relative Temp Index, Mech w/Impact (2)         130         °C         UL 746B           Relative Temp Index, Mech w/o impact (2)         130         °C         UL 746B           PHYSICAL (1)           Melt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5-0.7         %         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         V//mm         ASTM D149           Volume Resistivity         1.E+17         Q.cm         ASTM D149           Relative P	-	130		UL 746B
Relative Temp Index, Mech w/o impact (2)         130         °C         UL 746B           PHYSICAL (1)           Melt Volume Rate, MVR at 300°C/1.2 kg         23         cm²/10 min         ISO 1133           Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm²/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         ASTM D1238           Mold Transmission, 2.54 mm         88         %         ASTM D1003           Refractive Index         1.586         %         ASTM D1003           Refractive Index         1.586         2         ASTM D542           ELECTRICAL (1)         Q.cm         ASTM D257           Volume Resistivity         1.4.9         W/mm         ASTM D149           Polectri		130	°C	UL 746B
PHYSICAL <sup>(1)</sup> Melt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.5 – 0.7         %         ASTM D1033           Mace 2.54 mm         88         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL <sup>(1)</sup> Wolume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         KV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150		130	°C	UL 746B
Melt Volume Rate, MVR at 300°C/1.2 kg         23         cm³/10 min         ISO 1133           Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (³)         0.5 - 0.7         %         ASTM D1038           Maze, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (¹)         .         Q.cm         ASTM D257           Volume Resistivity         1.E+17         Q.cm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (³)         0.5 – 0.7         %         ASTM D1238           OPTICAL (¹)         V         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (¹)         V           Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150		23	cm³/10 min	ISO 1133
Specific Volume         0.83         cm³/g         ASTM D792           Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (³)         0.5 – 0.7         %         SABIC method           OPTICAL (¹)         V         ASTM D1003           Haze, 2.54 mm         88         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (¹)         C         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150			-	
Density         1.19         g/cm³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           OPTICAL (1)         User Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150			cm³/a	
Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           OPTICAL (1)           Light Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150			,-	
Water Absorption, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5 − 0.7         %         SABIC method           OPTICAL (1)         User Company (1)         SASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Volume Resistivity         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           OPTICAL (1)           Light Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
Melt Flow Rate, 300°C/1.2 kgf         25         g/10 min         ASTM D1238           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           OPTICAL (1)           Light Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           OPTICAL (1)         Light Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
OPTICAL (1)           Light Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
Light Transmission, 2.54 mm         88         %         ASTM D1003           Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150	_			manda
Haze, 2.54 mm         1         %         ASTM D1003           Refractive Index         1.586         -         ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150		00	9/	ACTM D1002
Refractive Index         1.586         - ASTM D542           ELECTRICAL (1)         Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         - ASTM D150				
ELECTRICAL <sup>(1)</sup> Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150			/0	
Volume Resistivity         1.E+17         Ω.cm         ASTM D257           Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150		1.300	-	ASTIVI DO42
Dielectric Strength, in air, 3.2 mm         14.9         kV/mm         ASTM D149           Relative Permittivity, 50/60 Hz         3.17         -         ASTM D150				
Relative Permittivity, 50/60 Hz 3.17 - ASTM D150				
Relative Permittivity, 1 MHz 2.96 - ASTM D150			-	
	Relative Permittivity, 1 MHz	2.96	-	ASIM D150



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D150
Dissipation Factor, 1 MHz	0.01	-	ASTM D150
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Volume Resistivity	>1.E+15	$\Omega.$ cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	27	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
Hot-Wire Ignition (HWI), PLC 2	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.1	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥1.1	mm	UL 746A
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E121562-103956751	-	-
UL Yellow Card Link 2	E207780-103876512	-	-
UL Recognized, 94V-2 Flame Class Rating	≥1.1	mm	UL 94
Oxygen Index (LOI)	25	%	ISO 4589
INJECTION MOLDING (4)			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	270 – 295	°C	
Nozzle Temperature	265 – 290	°C	
Front - Zone 3 Temperature	270 – 295	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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.

<sup>(4)</sup> 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.



## **DISCLAIMER**

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