

## LNPTM COLORCOMPTM COMPOUND D1000RXP

## **DESCRIPTION**

LNP COLORCOMP D1000RXP compound is based on Polycarbonate (PC) resin. Added features of this grade include: Mold Release.

## **TYPICAL PROPERTY VALUES**

Revision 20231109

| RECHANICAL 19           Tensile Stress, yid. Type 1, 50 mm/min         62         MPa         ASTM D638           Tensile Stress, bix, Type 1, 50 mm/min         68         MPa         ASTM D638           Tensile Strain, yid. Type 1, 50 mm/min         135         8         ASTM D638           Tensile Strain, bix, Type 1, 50 mm/min         135         8         ASTM D638           Reward Rivers, yid. 1, 3 mm/min, 50 mm span         97         MPa         ASTM D790           Hardness, Rockwell M         70         -         ASTM D780           Hardness, Rockwell M         118         -         ASTM D785           Hardness, Rockwell R         118         -         ASTM D785           Taber Abrasion, CS-17, 1 kg         10         my/loocy         ASTM D785           Taber Abrasion, CS-17, 1 kg         907         J/m         ASTM D4812           Izod Impact, unnotched, 23°C         3204         J/m         ASTM D4812           Izod Impact, proteched, 23°C         320         J/m         ASTM D4812           Falling Dart Impact (D3029); 23°C         16         C         ASTM D4812           Falling Dart Impact (D3029); 23°C         15         S         ASTM D4812           Falling Dart Impact (D3029); 23°C         35         <  | PROPERTIES                               | TYPICAL VALUES | UNITS     | TEST METHODS |
|--|--|----------------|-----------|--------------|
| Tensile Stress, birt, Type 1, 50 mm/min         62         MPG         ASTM D638           Tensile Stress, birt, Type 1, 50 mm/min         88         MPG         ASTM D638           Tensile Strain, birt, Type 1, 50 mm/min         135         3         ASTM D638           Tensile Strain, birt, Type 1, 50 mm/min         313         MPG         ASTM D790           Beward Moduls, 1, 3 mm/min, 50 mm span         2340         MPG         ASTM D790           Hardness, Rockwell M         10         -         ASTM D780           Hardness, Rockwell R         118         -         ASTM D785           Taber Alvasion, CS17, Isly         20         Mm Journal Office         ASTM D785           Taber Alvasion, CS17, Isly         20         Jim         ASTM D4812           Total Inspect, unnotched, 23°C         30         Jim         ASTM D4812           Total Inspect, David, 23°C         90         Jim         ASTM D4812           Tensile Impact, David, 23°C         30         Jim         ASTM D4812           Tensile Impact, David, 23°C         30         ASTM D4812         ASTM D4812           Tensile Impact, Environ, David, 24°C         30         ASTM D4812         ASTM D4812           Tensile Impact, Environ, David, 24°C         30         ASTM D4812 <td>AUGUANICAL (1)</td> <td></td> <td></td> <td></td>  | AUGUANICAL (1)                           |                |           |              |
| Tensile Strais, bid, Type I, 50 mm/min         68         MPa         ASTM D638           Tensile Strain, bid, Type I, 50 mm/min         7         %         ASTM D638           Flexile Strain, bid, Type I, 50 mm/min         35         %         ASTM D638           Flexural Stress, bid, 1.3 mm/min, 50 mm span         97         MPa         ASTM D790           Hardness, Rockwell M         70         MPa         ASTM D785           Hardness, Rockwell M         10         90         ASTM D785           Hardness, Rockwell M         10         90         ASTM D785           Hardness, Rockwell R         10         90         ASTM D785           Hardness, Rockwell R         10         90         ASTM D785           Hardness, Rockwell R         10         90         ASTM D1044           Hardness, Rockwell M         10         90         ASTM D1044           Hardness, Rockwell R         10         10         ASTM D1044           Bardness, Rockwell M         10         10         ASTM D1044           Hardness, Rockwell M         10         10         ASTM D1044           Hardness, Rockwell M         20         10         ASTM D184           Hardness, Rockwell M         20         20   |  | 62             | MDa       | ACTAL DC 20  |
| Tensile Strain, Jrd, Type I, 50 mm/min         7         %         ASIM De38           Tensile Strain, Jrk, Type I, 50 mm/min         315         %         ASIM De38           Flexural Stress, ydi. A. 3 mm/min, 50 mm span         3240         Mr8         ASIM D709           Beruarla Modulus, 1.3 mm/min, 50 mm span         70         -         ASIM D785           Hardness, Rockwell R         18         -         ASIM D684           Barbard Strain, Unstrained Reserved Re   |  |                |           |              |
| Tensile Strain, br. Y. Type I. 50 mm/min         135         %         ASTM D638           Flexural Stress, yd. 1.3 mm/min, 50 mm span         97         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         70         4.0 Mpa         ASTM D785           Hardness, Rockwell R         118         - 0         ASTM D785           Hardness, Rockwell R         118         - 0         ASTM D185           Taber Abrasion, CS-17, 1kg         10         mg/10000         ASTM D1841           Taber Abrasion, CS-17, 1kg         20         Jm         ASTM D4812           Izod Impact, unnotched, 23°C         30         Jm         ASTM D4812           Izod Impact, pact Strength, Type S         30         Jm         ASTM D4812           Izod Impact, unnotched, 23°C         90         Jm         ASTM D4812           Izod Impact, pact Strength, Type S         30         Jm         ASTM D4812           Izod Impact, unnotched, 23°C         30         Jm         ASTM D4812           Izod Impact, pact (D309), 23°C         31         45         C         ASTM D4812           Izod Impact, pact (D309), 23°C         32         45         C         ASTM D4812           Izod Impact, pact (D309), 23°C         34         MSTM D481  |  |                |           |              |
| Flexural Stress, yd. 1.3 mm/min, 50 mm span         97         MPa         ASTM 0790           Flexural Modulus, 1.3 mm/min, 50 mm span         2340         MPa         ASTM 0780           Hardness, Rockwell M         118  |  |                |           |              |
| Betward Modulus, 1.3 mm/min, 50 mm span         2340         MPA         ASTM D795           Hardness, Rockwell M         70         3         ASTM D785           Hardness, Rockwell R         10         90         351M D785           Taber Abrasio, CS17, 1 kg         10         mg/1000cm         ASTM D481 D481           Taber Abrasio, CS17, 1 kg         30         1/m         ASTM D4812           Index Crit         3         3         1/m         ASTM D4812           Index Impact, unnotched, 23°C         30         1/m         ASTM D4812           Ize Buile Impact Strength, Type S         63         3         1/m         ASTM D4812           Falling Dart Impact (19 3029), 23°C         69         3         7         ASTM D482           Falling Dart Impact (19 3029), 23°C         169         2         ASTM D482           Full (19 3029), 23°C         169         2         ASTM D482           Falling Dart Impact (19 3029), 23°C         18         2         ASTM D482           Full (19 4 Mm), unannealed         13         6         ASTM D482           HDT, 1.52 MPa, 6.4 mm, unannealed         1.2         2         ASTM D482           CET, 4.0°C to 95°C, flow         2.2         ASTM C25         ASTM C174   | · · · · · · · · · · · · · · · · · · ·    |                |           |              |
| Hardness, Rockwell M         70         35M D785           Hardness, Rockwell R         18         -         ATM D785           Taber Abrasion. Cs-17, 1kg         10         10         100 mg/100cw         ATM D104           MPACT "**         Faller Abrasion. Cs-17, 1kg         304         1/m         ASTM D481           Exod Impact, unnotched, 23°C         309         1/m         ASTM D4812           Tessile Impact Strength, Type S         60         1/m         ASTM D1822           Falling Dart Impact, 10x1 Strength, Type S         169         2         1/m         ASTM D1822           Falling Dart Impact Strength, Type S         60         90         2         ASTM D1822           Falling Dart Impact David Strength, Type S         169         2         1/m         ASTM D1822           Falling Dart Impact David Strength, Type S         169         2         ASTM D1822           Falling Dart Impact David Strength, Type S         18         6         2         ASTM D1822           HOTT, 4.0°C         4         ASTM D1822         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4 <th< td=""><td></td><td></td><td></td><td></td></th<>   |  |                |           |              |
| Hardness, Rockwell R         188         - Ome plant of the plant o | , , ,                                    |                | MPa       |              |
| Taber Abrasion, Cs.17, 1kg         10         mp/100ccpt         ASTM D1044         MPACT "I           Impact, unnotched, 23°C         3204         J/m         ASTM D4812         ASTM D4812         ASTM D182         ASTM D182         ASTM D182         Medical mapact, notched, 23°C         300         J/m         ASTM D182         ASTM D683         ASTM D683         ASTM D683         ASTM D683         ASTM D684         ASTM D68   |  |                | -         |              |
| IMPACT (¹)         IX od Impact, unnotched, 23°C         3204         J/m         ASTM D4812           Izod Impact, notched, 23°C         907         J/m         ASTM D256           Tensile Impact Strength, Type S         300         J/m²         ASTM D256           Falling Dart Impact (D 3029), 23°C         169         ½/m²         ASTM D3029           HERMAL!         ************************************   |  |                | -         | ASTM D785    |
| Ize of Impact, unnotched, 23°C         3204         J/m         ASTM D4812           Ize of Impact, notched, 23°C         907         J/m         ASTM D256           Tensile Impact Strength, Type S         630         J/m²         ASTM D425           Falling Dart Impact (D 3029), 23°C         169         19         ASTM D402           HERRMAL!**           Vicat Softening Temp, Rate B/50         154         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         122         °C         ASTM D648           CE. 40°C to 95°C, flow         1.25         J/g°C         ASTM D648           Depetific Heat         1.25         J/g°C         ASTM D648           Thermal Conductivity         0.29         M/m²C         ASTM C177           Relative Temp Index, Mech w/impact (3)         130         °C         U.1 7468           Relative Temp Index, Mech w/impact (3)         130         °C         U.1 7468           Relative Temp Index, Mech w/impact (3)         130         °C         ASTM D792           Poscific Gravity         1         C         ASTM D792           Poscific Gravity         1         S   | _  | 10             | mg/1000cy | ASTM D1044   |
| Ize of Impact, notched, 23°C         997         I/m         ASTM D256           Tensile Impact Strength, Type S         630         kl/m²         ASTM D1822           Falling Dart Impact (0 3029), 23°C         169         J         ASTM D3029           HERMALI**           Vicas Ordering Temp, Rate B/50         154         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           Better Close Scr. flow         0.99         °C         ASTM C31         C17           Relative Temp Index, Mech Wilmpact (2)         130         °C         U.746B         C17 <t< td=""><td>IMPACT (1)</td><td></td><td></td><td></td></t<>   | IMPACT (1)                               |                |           |              |
| Tensile Impact Strength, Type S         630         ki/m²         ASTM D1822           Falling Dart Impact (D 3029), 23°C         169         J         ASTM D3029           THERMAL ************************************  | Izod Impact, unnotched, 23°C             | 3204           | J/m       | ASTM D4812   |
| Falling Dart Impact (D 3029), 23°C         169         J         ASTM D3029           THERMAL (¹)           Vicat Softening Temp, Rate B/50         154         °C         ASTM D1525           HDT, 0.45 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           CTE, 40°C to 95°C, flow         6.84€05         1/°C         ASTM C351           Specific Heat         1.25         ½g°C         ASTM C177           Relative Temp Index, Elec (²)         130         °C         U.746B           Relative Temp Index, Mech w/nimpact (²)         130         °C         U.746B           Relative Temp Index, Mech w/nimpact (²)         130         °C         U.746B           Relative Temp Index, Mech w/nimpact (²)         130         °C         U.746B           Relative Temp Index, Mech w/nimpact (²)         130         °C         ASTM D792           Specific Gravity         1.2         °C         ASTM D792           Specific Gravity         1.9         9/cm²         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %   | Izod Impact, notched, 23°C               | 907            | J/m       | ASTM D256    |
| THERMAL (*)           Vicat Softening Temp, Rate B/50         154         °C         ASTM D1525           HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           CTE, -40°C to 95°C, flow         6.84E·05         1/°C         ASTM C351           Specific Heat         1.25         1/g°C         ASTM C351           Thermal Conductivity         0.29         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/o impact <sup>(2)</sup> 130         °C         U. 7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 12         S         ASTM D792           Specific Gravity         1.2         S         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5         0   | Tensile Impact Strength, Type S          | 630            | kJ/m²     | ASTM D1822   |
| Vicat Softening Temp, Rate 8/50         154         °C         ASTM D1525           HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           CTE, 40°C to 95°C, flow         6.84E.05         1/° C         ASTM E831           Specific Heat         1.25         J/g °C         ASTM C351           Thermal Conductivity         0.29         W/m °C         ASTM C177           Relative Temp Index, Mech w/impact <sup>(2)</sup> 130         °C         U.746B           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         U.746B           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         U.746B           PHYSICAL <sup>(1)</sup> 5         U.746B         ***           Specific Gravity         1.2         C         ASTM D792           Specific Volume         8.8         g/m³         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D792           Water Absorption, (23°C/5aturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5         %         ASTM D570           Mold Shrinkage, flo  | Falling Dart Impact (D 3029), 23°C       | 169            | J         | ASTM D3029   |
| HDT, 0.45 MPa, 6.4 mm, unannealed         137         °C         ASTM D648           HDT, 1.82 MPa, 6.4 mm, unannealed         132         °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         0.29         W/m·°C         ASTM C177           Relative Temp Index, Elec (²)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (²)         130         °C         UL 7468           Relative Temp Index, Mech w/impact (²)         130         °C         UL 7468           PHYSICAL (¹)         2         C         UL 7468           Specific Gravity         1.2         -         ASTM D792           Specific Volume         0.83         cm²/g         ASTM D792           Density         1.19         g/cm³/g         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         5.0-0.7         %         ASIM D1238           Mold Shrinkage, flow, 3.2 mm (³) <th< td=""><td>THERMAL (1)</td><td></td><td></td><td></td></th<>  | THERMAL (1)                              |                |           |              |
| HDT, 1.82 MPa, 6.4 mm, unannealed         132         °C         ASTM D648           CTE, -40°C to 95°C, flow         6.84€-05         1/°C         ASTM E831           Specific Heat         1.25         J/g°C         ASTM C351           Thermal Conductivity         0.29         W/m°C         ASTM C177           Relative Temp Index, Elec (²)         130         °C         UL 7468           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)         **         C         UL 746B           PHYSICAL (¹)         **         ASTM D792           Specific Gravity         1.2         **         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Water Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm (³)         0.5 - 0.7         %         ASTM D1238           OPTICAL (¹)         **         ASTM D1238         ASTM D1238           OPTICAL (¹)         **         ASTM D1238         ASTM D1  | Vicat Softening Temp, Rate B/50          | 154            | °C        | ASTM D1525   |
| 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         0.29         W/m°C         ASTM C177           Relative Temp Index, Elec <sup>(2)</sup> 130         °C         U1.7468           Relative Temp Index, Mech w/impact <sup>(2)</sup> 130         °C         U1.7468           Relative Temp Index, Mech w/o impact <sup>(2)</sup> 130         °C         U1.7468           PHYSICAL <sup>(1)</sup> **         V1.7468         **           Specific Gravity         1.2         **         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Vater Absorption, (23°C/24hrs)         0.15         %         ASTM D570           Water Absorption, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.5 − 0.7         %         ASTM D138           OPTICAL <sup>(1)</sup> **         ASTM D138         OPTICAL <sup>(1)</sup> Light Transmission, 2.54 mm         88         %         ASTM D1003  | HDT, 0.45 MPa, 6.4 mm, unannealed        | 137            | °C        | ASTM D648    |
| Specific Heat         1.25         Jg °C         ASTM C351           Thermal Conductivity         0.29         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/o impact (²)         130         °C         U.746B           PHYSICAL (¹)         **         ASTM D792           Specific Gravity         1.2         ASTM D792         ASTM D792           Specific Volume         0.83         m²/g         ASTM D792           Vater Absorption, (23°C/24hrs)         0.15         %         ASTM D792           Water Absorption, (23°C/24hrs)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.5         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm (³)         0.5 − 0.7         %         ASTM D1238           OPTICAL (¹)         T         ASTM D1238         OPTICAL (¹)           Light Transmission, 2.54 mm         88         8         ASTM D1003   | HDT, 1.82 MPa, 6.4 mm, unannealed        | 132            | °C        | ASTM D648    |
| Thermal Conductivity         0.29         W/m °C         ASTM C177           Relative Temp Index, Elec (²²)         130         °C         UL 746B           Relative Temp Index, Mech w/impact (²²)         130         °C         UL 746B           Relative Temp Index, Mech w/o impact (²²)         130         °C         UL 746B           PHYSICAL (¹)         "C         UL 746B           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, (23°C/24hrs)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm (³)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D123           OPTICAL (¹)         (1)         ASTM D103         ASTM D103   | CTE, -40°C to 95°C, flow                 | 6.84E-05       | 1/°C      | ASTM E831    |
| 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)           Feetific Gravity         1.2         Sec (2)         ASTM D792           Specific Volume         0.83         cm³/g         ASTM D792           Density         July         Morry         ASTM D792           Water Absorption, (23°C/24hrs)         1.19         %         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         0.5-0.7         %         ASIM D1238           OPTICAL (1)           Light Transmission, 2.54 mm         88         %         ASTM D1003  | Specific Heat                            | 1.25           | J/g-°C    | ASTM C351    |
| Relative Temp Index, Mech w/impact (2)130°CUL 746BRelative Temp Index, Mech w/o impact (2)130°CUL 746BPHYSICAL (1)Specific Gravity1.2SecurityASTM D792Specific Volume0.83cm³/gASTM D792Density1.19g/cm³ASTM D792Water Absorption, (23°C/24hrs)0.15%ASTM D570Water Absorption, (23°C/5aturated)0.35%ASTM D570Water Absorption, equilibrium, 100°C0.58%ASTM D570Mold Shrinkage, flow, 3.2 mm (3)0.5 - 0.7%SABIC methodMelt Flow Rate, 300°C/1.2 kgf7g/10 minASTM D1238OPTICAL (1)Light Transmission, 2.54 mm88%ASTM D1003  | Thermal Conductivity                     | 0.29           | W/m-°C    | ASTM C177    |
| Relative Temp Index, Mech w/o impact (²)130°CU. 746BPHYSICAL (¹)Specific Gravity1.2-ASTM D792Specific Volume0.83cm³/gASTM D792Density1.19g/cm³ASTM D792Water Absorption, (23°C/24hrs)0.15%ASTM D570Water Absorption, equilibrium, 100°C3.5%ASTM D570Mold Shrinkage, flow, 3.2 mm (³)0.5 − 0.7%SABIC methodMelt Flow Rate, 300°C/1.2 kgf7g/10 minASTM D1238OPTICAL (¹)Light Transmission, 2.54 mm88%ASTM D1003  | Relative Temp Index, Elec (2)            | 130            | °C        | UL 746B      |
| PHYSICAL (1)Specific Gravity1.2-ASTM D792Specific Volume0.83cm³/gASTM D792Density1.19g/cm³ASTM D792Water Absorption, (23°C/24hrs)0.15%ASTM D570Water Absorption, (23°C/Saturated)0.35%ASTM D570Water Absorption, equilibrium, 100°C0.58%ASTM D570Mold Shrinkage, flow, 3.2 mm (3)0.5 - 0.7%SABIC methodMelt Flow Rate, 300°C/1.2 kgf7g/10 minASTM D1238OPTICAL (1)Light Transmission, 2.54 mm88%ASTM D1003   | Relative Temp Index, Mech w/impact (2)   | 130            | °C        | UL 746B      |
| Specific Gravity1.2- ASTM D792Specific Volume0.83cm³/gASTM D792Density1.19g/cm³ASTM D792Water Absorption, (23°C/24hrs)0.15%ASTM D570Water Absorption, (23°C/Saturated)0.35%ASTM D570Water Absorption, equilibrium, 100°C0.58%ASTM D570Mold Shrinkage, flow, 3.2 mm (³)0.5 - 0.7%SABIC methodMelt Flow Rate, 300°C/1.2 kgf7g/10 minASTM D1238OPTICAL (¹)Light Transmission, 2.54 mm88%ASTM D1003  | Relative Temp Index, Mech w/o impact (2) | 130            | °C        | UL 746B      |
| 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, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm (³)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D1238           OPTICAL (¹)         S         ASTM D1003   | PHYSICAL (1)                             |                |           |              |
| 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, (23°C/Saturated)         0.35         %         ASTM D570           Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm (³)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D1238           OPTICAL (¹)         S         ASTM D1003   | Specific Gravity                         | 1.2            |           | 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           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         9/10 min         ASTM D1238           OPTICAL (1)         Coption (1)         Coption (1)         Coption (2)         Coption (2)         Coption (2)         Coption (2)         Coption (2)         ASTM D1003   | Specific Volume                          | 0.83           | cm³/g     | 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           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         9/10 min         ASTM D1238           OPTICAL (1)         Coption (1)         Coption (2)         Coption (3)         ASTM D1003   |  | 1.19           |           | ASTM D792    |
| Water Absorption, equilibrium, 100°C         0.58         %         ASTM D570           Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D1238           OPTICAL (1)         S         ASTM D1003   | Water Absorption, (23°C/24hrs)           | 0.15           |           | ASTM D570    |
| Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D1238           OPTICAL (1)         Eight Transmission, 2.54 mm         88         %         ASTM D1003  | Water Absorption, (23°C/Saturated)       | 0.35           | %         | ASTM D570    |
| Mold Shrinkage, flow, 3.2 mm (3)         0.5 – 0.7         %         SABIC method           Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D1238           OPTICAL (1)         Eight Transmission, 2.54 mm         88         %         ASTM D1003  | Water Absorption, equilibrium, 100°C     | 0.58           | %         | ASTM D570    |
| Melt Flow Rate, 300°C/1.2 kgf         7         g/10 min         ASTM D1238           OPTICAL (1)         Light Transmission, 2.54 mm         88         %         ASTM D1003  |  | 0.5 – 0.7      | %         |              |
| OPTICAL (1)         Kight Transmission, 2.54 mm         88         %         ASTM D1003  |  | 7              | g/10 min  | ASTM D1238   |
| Light Transmission, 2.54 mm         88         %         ASTM D1003  |  |                | •         |              |
|  |  | 88             | %         | ASTM D1003   |
|  | Haze, 2.54 mm                            | 1              | %         | ASTM D1003   |



| PROPERTIES   | TYPICAL VALUES  | UNITS                           | TEST METHODS          |
|--|---|---------------------------------|-----------------------|
| 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             |
| Relative Permittivity, 1 MHz   | 2.96  | _                               | ASTM D150             |
| Dissipation Factor, 50/60 Hz   | 0.0009  | _                               | ASTM D150             |
| Dissipation Factor, 1 MHz  | 0.01  |                                 | ASTM D150             |
| Hot Wire Ignition {PLC)  | 2   | PLC Code                        | UL 746A               |
| Comparative Tracking Index (UL) {PLC}  | 2   | PLC Code                        | 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               |
| Hot-Wire Ignition (HWI), PLC 2   | ≥1.5  | mm                              | UL 746A               |
|  | ≥1.1  |                                 |                       |
| Hot-Wire Ignition (HWI), PLC 3   | <1.1  | mm                              | UL 746A               |
| FLAME CHARACTERISTICS (2)  |   |                                 |                       |
|  |   |                                 |                       |
| UL Yellow Card Link  | E207780-103938181   | -                               | -                     |
|  | ≥0.7  | -<br>mm                         | -<br>UL 94            |
| UL Yellow Card Link UL Recognized, 94HB Flame Class Rating UV-light, water exposure/immersion  | <u> </u>  | -<br>mm<br>-                    | -<br>UL 94<br>UL 746C |
| UL Yellow Card Link UL Recognized, 94HB Flame Class Rating   | ≥0.7  | mm                              |                       |
| UL Yellow Card Link UL Recognized, 94HB Flame Class Rating UV-light, water exposure/immersion  | ≥0.7  | - mm<br>- °C                    |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)   | ≥0.7<br>F2  |                                 |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature   | ≥0.7<br>F2  | -<br>°C                         |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING <sup>(4)</sup> Drying Temperature  Drying Time  | ≥0.7<br>F2<br>120<br>3 - 4  | °C<br>Hrs                       |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  | ≥0.7<br>F2<br>120<br>3 - 4<br>48  | °C<br>Hrs                       |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  | ≥0.7<br>F2<br>120<br>3 - 4<br>48<br>0.02  | °C<br>Hrs<br>Hrs                |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  | ≥0.7<br>F2<br>120<br>3 - 4<br>48<br>0.02<br>310 - 330   | °C<br>Hrs<br>Hrs<br>%           |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  Nozzle Temperature  | ≥0.7<br>F2<br>120<br>3 - 4<br>48<br>0.02<br>310 - 330<br>305 - 325                              | °C Hrs Hrs % °C                 |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  Nozzle Temperature  Front - Zone 3 Temperature  | ≥0.7<br>F2<br>120<br>3 - 4<br>48<br>0.02<br>310 - 330<br>305 - 325<br>310 - 330                 | °C Hrs Hrs % °C °C              |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  Nozzle Temperature  Front - Zone 3 Temperature  Middle - Zone 2 Temperature   | ≥0.7 F2  120 3 - 4 48 0.02 310 - 330 305 - 325 310 - 330 300 - 320                              | °C Hrs Hrs % °C °C °C           |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  Nozzle Temperature  Front - Zone 3 Temperature  Middle - Zone 2 Temperature  Rear - Zone 1 Temperature                                  | ≥0.7 F2  120 3 - 4 48 0.02 310 - 330 305 - 325 310 - 330 300 - 320 290 - 310                    | °C Hrs Hrs % °C °C °C °C        |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  Nozzle Temperature  Front - Zone 3 Temperature  Middle - Zone 2 Temperature  Rear - Zone 1 Temperature  Mold Temperature                | ≥0.7 F2  120 3 - 4 48 0.02 310 - 330 305 - 325 310 - 330 300 - 320 290 - 310 80 - 115           | °C Hrs  Hrs  % °C °C °C °C °C   |                       |
| UL Yellow Card Link  UL Recognized, 94HB Flame Class Rating  UV-light, water exposure/immersion  INJECTION MOLDING (4)  Drying Temperature  Drying Time  Drying Time (Cumulative)  Maximum Moisture Content  Melt Temperature  Nozzle Temperature  Front - Zone 3 Temperature  Middle - Zone 2 Temperature  Rear - Zone 1 Temperature  Mold Temperature  Back Pressure | ≥0.7 F2  120 3 - 4 48 0.02 310 - 330 305 - 325 310 - 330 300 - 320 290 - 310 80 - 115 0.3 - 0.7 | °C Hrs Hrs % °C °C °C °C °C MPa |                       |

<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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