

# LNPT<sup>™</sup> ELCRIN<sup>™</sup> DMX6034RCC

## DESCRIPTION

ELCRIN DMX6034RCC is an improved scratch resistant polycarbonate copolymer that contains 20% Post consumer recycle content. This medium flow, UV stabilized, custom colorable resin is an excellent candidate for wide variety of electronics, consumer, and industrial applications that require improved scratch resistance.

### GENERAL INFORMATION

|                       |                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------|
| Features              | Scratch Resistance, Impact resistant, Weatherable/UV stable, No PFAS intentionally added |
| Fillers               | Unreinforced                                                                             |
| Polymer Types         | Polycarbonate (PC)                                                                       |
| Processing Techniques | Injection Molding                                                                        |

### INDUSTRY

Automotive  
Consumer  
Electrical and Electronics

### SUB INDUSTRY

Automotive Interiors  
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance  
Electrical Devices and Displays, Electrical Components and Infrastructure

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>             |                |                   |              |
| Tensile Stress, yield, 50 mm/min             | 60             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 55             | MPa               | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 6              | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 93             | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 2068           | MPa               | ISO 527      |
| Flexural Modulus, 2 mm/min                   | 2120           | MPa               | ISO 178      |
| Flexural Stress, yield, 2 mm/min             | 86             | MPa               | ISO 178      |
| Tensile Modulus, 50 mm/min                   | 2190           | MPa               | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | 75             | %                 | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 7              | %                 | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 59             | MPa               | ASTM D638    |
| Tensile Stress, yld, Type I, 50 mm/min       | 61             | MPa               | ASTM D638    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2100           | MPa               | ASTM D790    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 97             | MPa               | ASTM D790    |
| Pencil Hardness test, 0.5 kgf                | F              | -                 | ASTM D3363   |
| Hardness, Rockwell M                         | 62             | -                 | ASTM D785    |
| <b>IMPACT <sup>(1)</sup></b>                 |                |                   |              |
| Izod Impact, notched 80*10*3 +23°C           | 37             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*3 -30°C           | 72             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, unnotched 80*10*3 +23°C         | 178            | kJ/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, unnotched 80*10*3 -30°C         | 183            | kJ/m <sup>2</sup> | ISO 180/1U   |

| PROPERTIES                                   | TYPICAL VALUES | UNITS                   | TEST METHODS |
|----------------------------------------------|----------------|-------------------------|--------------|
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm   | 40             | kJ/m <sup>2</sup>       | ISO 179/1eA  |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm  | 9              | kJ/m <sup>2</sup>       | ISO 179/1eA  |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm   | 297            | kJ/m <sup>2</sup>       | ISO 179/1eU  |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm  | 262            | kJ/m <sup>2</sup>       | ISO 179/1eU  |
| Izod Impact, notched, 23°C                   | 515            | J/m                     | ASTM D256    |
| Izod Impact, notched, 0°C                    | 258            | J/m                     | ASTM D256    |
| Izod Impact, notched, -30°C                  | 116            | J/m                     | ASTM D256    |
| Izod Impact, unnotched, 23°C                 | NB             | J/m                     | ASTM D4812   |
| Izod Impact, unnotched, -30°C                | NB             | J/m                     | ASTM D4812   |
| Instrumented Dart Impact Total Energy, 23°C  | 67             | J                       | ASTM D3763   |
| <b>THERMAL <sup>(1)</sup></b>                |                |                         |              |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 112            | °C                      | ISO 75/Af    |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm       | 129            | °C                      | ISO 75/Bf    |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 117            | °C                      | ASTM D648    |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 131            | °C                      | ASTM D648    |
| Vicat Softening Temp, Rate B/50              | 136            | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120             | 138            | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/50              | 136            | °C                      | ASTM D1525   |
| Vicat Softening Temp, Rate B/120             | 138            | °C                      | ASTM D1525   |
| CTE, -40°C to 40°C, flow                     | 7.5E-05        | 1/°C                    | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                    | 7.7E-05        | 1/°C                    | ISO 11359-2  |
| CTE, -40°C to 40°C, flow                     | 7.5E-05        | 1/°C                    | ASTM E831    |
| CTE, -40°C to 40°C, xflow                    | 7.7E-05        | 1/°C                    | ASTM E831    |
| <b>PHYSICAL <sup>(1)</sup></b>               |                |                         |              |
| Density                                      | 1.16           | g/cm <sup>3</sup>       | ISO 1183     |
| Moisture Absorption, (23°C/50% RH/24 hrs)    | 0.06           | %                       | ASTM D570    |
| Water Absorption, (23°C/24hrs)               | 0.11           | %                       | ASTM D570    |
| Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>  | 0.5 – 0.8      | %                       | ASTM D955    |
| Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup> | 0.5 – 0.8      | %                       | ASTM D955    |
| Specific Gravity                             | 1.17           | -                       | ASTM D792    |
| Melt Volume Rate, MVR at 300°C/1.2 kg        | 9              | cm <sup>3</sup> /10 min | ISO 1133     |
| Melt Flow Rate, 300°C/1.2 kgf                | 10             | g/10 min                | ASTM D1238   |
| Melt Volume Rate, MVR at 300°C/1.2 kg        | 9              | cm <sup>3</sup> /10 min | ASTM D1238   |
| <b>INJECTION MOLDING <sup>(3)</sup></b>      |                |                         |              |
| Drying Temperature                           | 110            | °C                      |              |
| Drying Time                                  | 3 – 4          | Hrs                     |              |
| Maximum Moisture Content                     | 0.02           | %                       |              |
| Melt Temperature                             | 290 – 310      | °C                      |              |
| Rear - Zone 1 Temperature                    | 260 – 280      | °C                      |              |
| Middle - Zone 2 Temperature                  | 280 – 305      | °C                      |              |
| Front - Zone 3 Temperature                   | 290 – 310      | °C                      |              |
| Nozzle Temperature                           | 290 – 310      | °C                      |              |
| Mold Temperature                             | 60 – 85        | °C                      |              |



- (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) 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.
- (3) 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.

### ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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