



## Noryl\* Resin N225X Americas: COMMERCIAL

PPE+PS blend. Unfilled. Halogen-Free FR performance. UL94 V0/5VA. UL746C F1. Dielectric Strength. Suitable for E/E market indoor/outdoor applications.

| YPICAL PROPERTIES <sup>1</sup>                | TYPICAL VALUE | Unit                | Standard     |
|---|---------------|---------------------|--------------|
| MECHANICAL                                    |               |                     |              |
| Tensile Stress, yld, Type I, 50 mm/min        | 680           | kgf/cm <sup>2</sup> | ASTM D 638   |
| Tensile Stress, brk, Type I, 50 mm/min        | 500           | kgf/cm <sup>2</sup> | ASTM D 638   |
| Tensile Strain, yld, Type I, 50 mm/min        | 8             | %                   | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min        | 17            | %                   | ASTM D 638   |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 1010          | kgf/cm <sup>2</sup> | ASTM D 790   |
| Flexural Modulus, 2.6 mm/min, 100 mm span     | 25400         | kgf/cm <sup>2</sup> | ASTM D 790   |
| IMPACT  |               |                     |              |
| Izod Impact, notched, 23°C                    | 19            | cm-kgf/cm           | ASTM D 256   |
| Izod Impact, notched, -30°C                   | 9             | cm-kgf/cm           | ASTM D 256   |
| Izod Impact, Reverse Notched, 3.2 mm          | 90            | cm-kgf/cm           | ASTM D 256   |
| Instrumented Impact Energy @ peak, 23°C       | 400           | cm-kgf              | ASTM D 3763  |
| Instrumented Impact Energy @ peak, -30        | 118           | cm-kgf              | ASTM D 3763  |
| THERMAL                                       |               |                     |              |
| Vicat Softening Temp, Rate B/50               | 128           | °C                  | ASTM D 1525  |
| HDT, 0.45 MPa, 6.4 mm, unannealed             | 109           | °C                  | ASTM D 648   |
| HDT, 1.82 MPa, 6.4 mm, unannealed             | 99            | °C                  | ASTM D 648   |
| Relative Temp Index, Elec                     | 95            | °C                  | UL 746B      |
| Relative Temp Index, Mech w/impact            | 80            | °C                  | UL 746B      |
| Relative Temp Index, Mech w/o impact          | 95            | °C                  | UL 746B      |
| PHYSICAL                                      |               |                     |              |
| Specific Gravity                              | 1.11          | -                   | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm                  | 0.5 - 0.7     | %                   | SABIC Method |
| Mold Shrinkage, xflow, 3.2 mm                 | 0.5 - 0.7     | %                   | SABIC Method |
| ELECTRICAL                                    |               |                     |              |
| Volume Resistivity                            | 2.8E+16       | Ohm-cm              | ASTM D 257   |

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23&#176:C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.
(5) 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.

Source GMD, last updated:

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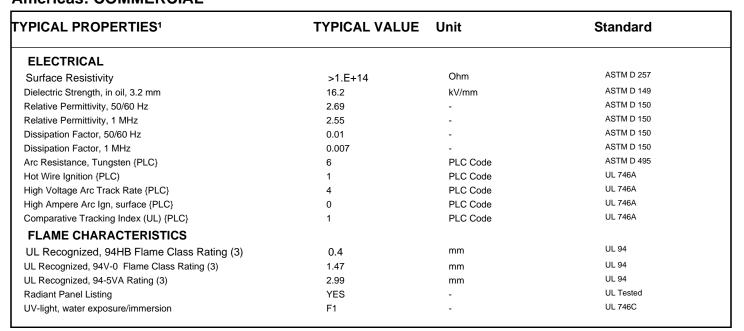
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| ROCESSING PARAMETERS        | TYPICAL VALUE | Unit |  |
|-----------------------------|---------------|------|--|
| Injection Molding           |               |      |  |
| Drying Temperature          | 95 - 100      | °C   |  |
| Drying Time                 | 3 - 4         | hrs  |  |
| Drying Time (Cumulative)    | 8             | hrs  |  |
| Maximum Moisture Content    | 0.02          | %    |  |
| Melt Temperature            | 260 - 290     | °C   |  |
| Nozzle Temperature          | 260 - 290     | °C   |  |
| Front - Zone 3 Temperature  | 250 - 290     | °C   |  |
| Middle - Zone 2 Temperature | 240 - 280     | °C   |  |
| Rear - Zone 1 Temperature   | 225 - 275     | °C   |  |
| Mold Temperature            | 70 - 95       | °C   |  |
| Back Pressure               | 0.3 - 0.7     | MPa  |  |
| Screw Speed                 | 20 - 100      | rpm  |  |
| Shot to Cylinder Size       | 30 - 70       | %    |  |
| Vent Depth                  | 0.038 - 0.051 | mm   |  |

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