

# Panlite® GN-3610Z

## TEIJIN LIMITED - Polycarbonate

### General Information

#### Product Description

Glass fiber reinforced grades - 10% Glass fiber, Flame resistant grade, Non-bromine/non-phosphor type, Weather resistant

#### General

|                        |                                     |                                                                |                                                       |
|------------------------|-------------------------------------|----------------------------------------------------------------|-------------------------------------------------------|
| Filler / Reinforcement | • Glass Fiber, 10% Filler by Weight |                                                                |                                                       |
| Properties             | • Bromine Free<br>• Creep Resistant | • Flame Retardant<br>• Good Weather Resistance                 | • High Rigidity<br>• Low (to None) Phosphorus Content |
| Uses                   | • Electrical Parts                  | • Electrical/Electronic Applications • Industrial Applications |                                                       |
| Forms                  | • Pellets                           |                                                                |                                                       |
| Processing Method      | • Injection Molding                 |                                                                |                                                       |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                                  | Nominal Value | Unit              | Test Method     |
|-----------------------------------------------------------|---------------|-------------------|-----------------|
| Density                                                   | 1.27          | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage                                         |               |                   | Internal Method |
| Across Flow : 4.00 mm                                     | 0.40 to 0.60  | %                 |                 |
| Flow : 4.00 mm                                            | 0.30 to 0.50  | %                 |                 |
| Water Absorption (24 hr, 23°C)                            | 0.16          | %                 | ISO 62          |
| Mechanical                                                | Nominal Value | Unit              | Test Method     |
| Tensile Stress (Break, 23°C)                              | 67.0          | MPa               | ISO 527-2/5     |
| Tensile Strain (Break, 23°C)                              | 3.5           | %                 | ISO 527-2/5     |
| Flexural Modulus <sup>2</sup> (23°C)                      | 3600          | MPa               | ISO 178         |
| Flexural Stress <sup>2</sup> (23°C)                       | 115           | MPa               | ISO 178         |
| Impact                                                    | Nominal Value | Unit              | Test Method     |
| Charpy Notched Impact Strength (23°C)                     | 6.0           | kJ/m <sup>2</sup> | ISO 179         |
| Charpy Unnotched Impact Strength (23°C)                   | 50            | kJ/m <sup>2</sup> | ISO 179         |
| Thermal                                                   | Nominal Value | Unit              | Test Method     |
| Deflection Temperature Under Load<br>0.45 MPa, Unannealed | 138           | °C                | ISO 75-2/B      |
| Deflection Temperature Under Load<br>1.8 MPa, Unannealed  | 135           | °C                | ISO 75-2/A      |
| Vicat Softening Temperature                               | 140           | °C                | ISO 306/B50     |
| CLTE - Flow                                               | 4.0E-5        | cm/cm/°C          | ISO 11359-2     |
| CLTE - Transverse                                         | 6.0E-5        | cm/cm/°C          | ISO 11359-2     |
| RTI Elec (0.40 mm)                                        | 80.0          | °C                | UL 746B         |
| RTI Imp (0.40 mm)                                         | 80.0          | °C                | UL 746B         |
| RTI Str (0.40 mm)                                         | 80.0          | °C                | UL 746B         |

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| Electrical                     | Nominal Value | Unit    | Test Method    |
|--------------------------------|---------------|---------|----------------|
| Surface Resistivity            | > 1.0E+15     | ohms    | IEC 60093      |
| Volume Resistivity             | > 1.0E+15     | ohms·cm | IEC 60093      |
| Electric Strength <sup>3</sup> | 35            | kV/mm   | IEC 60243-1    |
| Dielectric Constant            |               |         | IEC 60250      |
| 100 Hz                         | 3.20          |         |                |
| 1 MHz                          | 3.20          |         |                |
| Dissipation Factor             |               |         | IEC 60250      |
| 100 Hz                         | 1.0E-3        |         |                |
| 1 MHz                          | 9.0E-3        |         |                |
| Comparative Tracking Index     | 175           | V       | IEC 60112      |
| Flammability                   | Nominal Value | Unit    | Test Method    |
| Flame Rating                   |               |         | UL 94          |
| 0.40 mm                        | V-2           |         |                |
| 1.0 mm                         | V-1           |         |                |
| 1.6 mm                         | V-0           |         |                |
| Glow Wire Flammability Index   |               |         | IEC 60695-2-12 |
| 1.0 mm                         | 960           | °C      |                |
| 1.6 mm                         | 960           | °C      |                |
| 3.0 mm                         | 960           | °C      |                |
| Glow Wire Ignition Temperature |               |         | IEC 60695-2-13 |
| 1.0 mm                         | 825           | °C      |                |
| 1.6 mm                         | 850           | °C      |                |
| 3.0 mm                         | 850           | °C      |                |

Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 2.0 mm/min

<sup>3</sup> short time test