

# Panlite® L-1225Y

TEIJIN LIMITED - Polycarbonate

Saturday, February 13, 2016

## General Information

### General

|                           |  |
|---------------------------|--|
| Material Status           | • Commercial: Active   |
| Availability              | • Africa & Middle East<br>• Asia Pacific<br>• Europe<br>• Latin America<br>• North America |
| Features                  | • Good Mold Release<br>• Low Viscosity   |
| Uses                      | • General Purpose  |
| Automotive Specifications | • GM QK 005931 Color: Clear  |
| Appearance                | • Clear/Transparent  |
| Forms                     | • Pellets  |
| Processing Method         | • Injection Molding  |

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

| Physical   | Nominal Value | Unit                   | Test Method     |
|--|---------------|------------------------|-----------------|
| Density  | 1.20          | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)         | 11.0          | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage                                  |               |                        | Internal Method |
| Across Flow : 4.00 mm                              | 0.50 to 0.70  | %                      |                 |
| Flow : 4.00 mm                                     | 0.50 to 0.70  | %                      |                 |
| Water Absorption (23°C, 24 hr)                     | 0.20          | %                      | ISO 62          |
| Mechanical   | Nominal Value | Unit                   | Test Method     |
| Tensile Modulus                                    | 2400          | MPa                    | ISO 527-2/1     |
| Tensile Stress (Yield)                             | 62.0          | MPa                    | ISO 527-2/50    |
| Tensile Strain (Yield)                             | 6.0           | %                      | ISO 527-2/50    |
| Nominal Tensile Strain at Break                    | > 50          | %                      | ISO 527-2/50    |
| Flexural Modulus <sup>2</sup>                      | 2350          | MPa                    | ISO 178         |
| Flexural Stress <sup>2</sup>                       | 92.0          | MPa                    | ISO 178         |
| Impact   | Nominal Value | Unit                   | Test Method     |
| Charpy Notched Impact Strength                     | 71            | kJ/m <sup>2</sup>      | ISO 179         |
| Charpy Unnotched Impact Strength                   | No Break      |                        | ISO 179         |
| Thermal  | Nominal Value | Unit                   | Test Method     |
| Heat Deflection Temperature (0.45 MPa, Unannealed) | 141           | °C                     | ISO 75-2/B      |
| Heat Deflection Temperature (1.8 MPa, Unannealed)  | 128           | °C                     | ISO 75-2/A      |
| Vicat Softening Temperature                        | 148           | °C                     | ISO 306/B50     |
| CLTE - Flow  | 7.0E-5        | cm/cm/°C               | ISO 11359-2     |
| CLTE - Transverse                                  | 7.0E-5        | cm/cm/°C               | ISO 11359-2     |
| RTI Elec (1.50 mm)                                 | 125           | °C                     | UL 746          |
| RTI Imp (1.50 mm)                                  | 115           | °C                     | UL 746          |
| RTI Str (1.50 mm)                                  | 125           | °C                     | UL 746          |

**Disclaimer:**

- The numerical values described in the data sheet are typical numerical values produced with a standard test method, and they do not guarantee the product's performance in a particular application.
- The flammability as described in the data sheet is an evaluation that resulted from a small-scale test, and it cannot be applied as it is to evaluate the actual risk of fire.
- Please contact us if you wish to use the product in medical equipment, food containers and packaging, and toys.
- If you wish to use various additives (antibacterial agents, stabilizers and flame retardants) or coloring agents with this resin, please consult with Teijin Ltd. beforehand. However, please note that Teijin Ltd. does not offer any kind of guarantee or bear any responsibility with regards to using this resin in any of these applications.
- The contents of the data sheet may change without notice.
- For other details, please see the Material Safety Data Sheet (MSDS) before use.
- Please contact the Resin & Plastic Processing Business Unit of Teijin Ltd. for detailed data.
- The raw materials used in our products may be subject to regulations depending on the type of system that exists to manage chemical substances in places to which our products are delivered. In addition, a separate application may need to be filed depending on the brand. There are also cases where imports of our products are not approved. If you are an importer or exporter and intend to import or export our products to new destinations, please make sure you contact us for details of regulatory compliance in those destinations.

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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> | 30            | kV/mm   | IEC 60243-1    |
| Relative Permittivity          |               |         | IEC 60250      |
| 100 Hz                         | 3.10          |         |                |
| 1 MHz                          | 3.00          |         |                |
| Dissipation Factor             |               |         | IEC 60250      |
| 100 Hz                         | 1.0E-3        |         |                |
| 1 MHz                          | 9.0E-3        |         |                |
| Comparative Tracking Index     | 250           | V       | IEC 60112      |
| Flammability                   | Nominal Value | Unit    | Test Method    |
| Flame Rating                   |               |         | UL 94          |
| 1.90 mm                        |               | HB      |                |
| 0.400 mm                       |               | V-2     |                |
| Glow Wire Flammability Index   |               |         | IEC 60695-2-12 |
| 1.50 mm                        | 850           | °C      |                |
| 3.00 mm                        | 960           | °C      |                |
| Glow Wire Ignition Temperature |               |         | IEC 60695-2-13 |
| 1.50 mm                        | 875           | °C      |                |
| 3.00 mm                        | 850           | °C      |                |
| Optical                        | Nominal Value | Unit    | Test Method    |
| Refractive Index               | 1.585         |         | ASTM D542      |
| Transmittance (3000 μm)        | 88.0          | %       | ASTM D1003     |

### 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

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