

# LEXAN™ 141 resin

Polycarbonate  
SABIC Innovative Plastics

Message:  
General purpose polycarbonate with melt flow rate of 10.5.

| General Information |                                                              |
|---------------------|--------------------------------------------------------------|
| UL YellowCard       | E121562-220861                                               |
| Features            | General Purpose                                              |
| Uses                | General Purpose                                              |
| Processing Method   | Injection Molding                                            |
| Multi-Point Data    | Coefficient of Thermal Expansion vs. Temperature (ASTM E831) |
|                     | Elastic Modulus vs Temperature (ASTM D4065)                  |
|                     | Flexural DMA (ASTM D4065)                                    |
|                     | Instrumented Impact (Energy) (ASTM D3763)                    |
|                     | Instrumented Impact (Load) (ASTM D3763)                      |
|                     | Pressure-Volume-Temperature (PVT - Zoller Method)            |
|                     | Shear DMA (ASTM D4065)                                       |
|                     | Specific Heat vs. Temperature (ASTM D3417)                   |
|                     | Tensile Creep (ASTM D2990)                                   |
|                     | Tensile Fatigue                                              |
|                     | Tensile Stress vs. Strain (ASTM D638)                        |
|                     | Thermal Conductivity vs. Temperature (ASTM E1530)            |
|                     | Viscosity vs. Shear Rate (ASTM D3835)                        |

| Physical                                 | Nominal Value | Unit               | Test Method     |
|------------------------------------------|---------------|--------------------|-----------------|
| Specific Gravity                         |               |                    | ASTM D792       |
| --                                       | 1.20          | g/cm <sup>3</sup>  |                 |
| --                                       | 1.19          | g/cm <sup>3</sup>  |                 |
| Specific Volume                          | 0.835         | cm <sup>3</sup> /g | ASTM D792       |
| Radiant Panel Listing (UL)               | YES           |                    |                 |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 11            | g/10 min           | ASTM D1238      |
| Molding Shrinkage - Flow (3.20 mm)       | 0.50 to 0.70  | %                  | Internal Method |
| Water Absorption                         |               |                    | ASTM D570       |
| 24 hr                                    | 0.15          | %                  |                 |
| Equilibrium, 23°C                        | 0.35          | %                  |                 |
| Equilibrium, 100°C                       | 0.58          | %                  |                 |
| Outdoor Suitability                      | f2            |                    | UL 746C         |
| Hardness                                 | Nominal Value | Unit               | Test Method     |
| Rockwell Hardness                        |               |                    | ASTM D785       |

| M-Scale                                                      | 70            |                   |                         |
|--------------------------------------------------------------|---------------|-------------------|-------------------------|
| R-Scale                                                      | 118           |                   |                         |
| Mechanical                                                   | Nominal Value | Unit              | Test Method             |
| Tensile Strength <sup>1</sup>                                |               |                   | ASTM D638               |
| Yield                                                        | 62.1          | MPa               |                         |
| Break                                                        | 68.9          | MPa               |                         |
| Tensile Elongation <sup>2</sup>                              |               |                   | ASTM D638               |
| Yield                                                        | 7.0           | %                 |                         |
| Break                                                        | 130           | %                 |                         |
| Flexural Modulus <sup>3</sup> (50.0 mm Span)                 | 2340          | MPa               | ASTM D790               |
| Flexural Strength <sup>4</sup> (Yield, 50.0 mm Span)         | 96.5          | MPa               | ASTM D790               |
| Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel) | 10.0          | mg                | ASTM D1044              |
| Impact                                                       | Nominal Value | Unit              | Test Method             |
| Notched Izod Impact (23°C)                                   | 800           | J/m               | ASTM D256               |
| Unnotched Izod Impact (23°C)                                 | 3200          | J/m               | ASTM D4812              |
| Instrumented Dart Impact (23°C, Energy at Peak Load)         | 63.8          | J                 | ASTM D3763              |
| Gardner Impact (23°C)                                        | 169           | J                 | ASTM D3029              |
| Tensile Impact Strength <sup>5</sup>                         | 578           | kJ/m <sup>2</sup> | ASTM D1822              |
| Thermal                                                      | Nominal Value | Unit              | Test Method             |
| Deflection Temperature Under Load                            |               |                   | ASTM D648               |
| 0.45 MPa, Unannealed, 6.40 mm                                | 138           | °C                |                         |
| 1.8 MPa, Unannealed, 6.40 mm                                 | 132           | °C                |                         |
| Vicat Softening Temperature                                  | 154           | °C                | ASTM D1525 <sup>6</sup> |
| CLTE - Flow (-40 to 95°C)                                    | 6.8E-5        | cm/cm/°C          | ASTM E831               |
| Specific Heat                                                | 1260          | J/kg/°C           | ASTM C351               |
| Thermal Conductivity                                         | 0.27          | W/m/K             | ASTM C177               |
| RTI Elec                                                     | 130           | °C                | UL 746                  |
| RTI Imp                                                      | 130           | °C                | UL 746                  |
| RTI Str                                                      | 130           | °C                | UL 746                  |
| Electrical                                                   | Nominal Value | Unit              | Test Method             |
| Volume Resistivity                                           | > 1.0E+17     | ohms · cm         | ASTM D257               |
| Dielectric Strength (3.20 mm, in Air)                        | 15            | kV/mm             | ASTM D149               |
| Dielectric Constant                                          |               |                   | ASTM D150               |
| 50 Hz                                                        | 3.17          |                   |                         |
| 60 Hz                                                        | 3.17          |                   |                         |
| 1 MHz                                                        | 2.96          |                   |                         |
| Dissipation Factor                                           |               |                   | ASTM D150               |
| 50 Hz                                                        | 9.0E-4        |                   |                         |
| 60 Hz                                                        | 9.0E-4        |                   |                         |
| 1 MHz                                                        | 0.010         |                   |                         |
| Comparative Tracking Index (CTI)                             | PLC 2         |                   | UL 746                  |

| High Amp Arc Ignition (HAI)           | PLC 1                              |      | UL 746      |
|---------------------------------------|------------------------------------|------|-------------|
| High Voltage Arc Tracking Rate (HVTR) | PLC 2                              |      | UL 746      |
| Hot-wire Ignition (HWI)               | PLC 2                              |      | UL 746      |
| Flammability                          | Nominal Value                      | Unit | Test Method |
| Flame Rating (0.711 mm)               | HB                                 |      | UL 94       |
| Oxygen Index                          | 25                                 | %    | ISO 4589-2  |
| Optical                               | Nominal Value                      | Unit | Test Method |
| Refractive Index                      | 1.586                              |      | ASTM D542   |
| Transmittance (2540 μm)               | 88.0                               | %    | ASTM D1003  |
| Haze (2540 μm)                        | 1.0                                | %    | ASTM D1003  |
| Injection                             | Nominal Value                      | Unit |             |
| Drying Temperature                    | 121                                | °C   |             |
| Drying Time                           | 3.0 to 4.0                         | hr   |             |
| Drying Time, Maximum                  | 48                                 | hr   |             |
| Suggested Max Moisture                | 0.020                              | %    |             |
| Suggested Shot Size                   | 40 to 60                           | %    |             |
| Rear Temperature                      | 271 to 293                         | °C   |             |
| Middle Temperature                    | 282 to 304                         | °C   |             |
| Front Temperature                     | 293 to 316                         | °C   |             |
| Nozzle Temperature                    | 288 to 310                         | °C   |             |
| Processing (Melt) Temp                | 293 to 316                         | °C   |             |
| Mold Temperature                      | 71.1 to 93.3                       | °C   |             |
| Back Pressure                         | 0.345 to 0.689                     | MPa  |             |
| Screw Speed                           | 40 to 70                           | rpm  |             |
| Vent Depth                            | 0.025 to 0.076                     | mm   |             |
| NOTE                                  |                                    |      |             |
| 1.                                    | Type I, 50 mm/min                  |      |             |
| 2.                                    | Type I, 50 mm/min                  |      |             |
| 3.                                    | 1.3 mm/min                         |      |             |
| 4.                                    | 1.3 mm/min                         |      |             |
| 5.                                    | Type S                             |      |             |
| 6.                                    | Rate B (120°C/h), Loading 2 (50 N) |      |             |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT