

# LEXAN™ 925A resin

Polycarbonate

SABIC Innovative Plastics Europe

## Message:

Lexan® 925A Polycarbonate (PC) resin is a non-filled, injection moldable grade of non-chlorinated, non-brominated flame retardant systems that has an UL-94 V0 rating. Lexan 925A is available in transparent and tinted color options and is a general-purpose resin ideal for a wide variety of applications.

| General Information                        |                   |                        |                 |
|--------------------------------------------|-------------------|------------------------|-----------------|
| UL YellowCard                              | E45329-236664     |                        |                 |
| Additive                                   | Flame Retardant   |                        |                 |
| Features                                   | Bromine Free      |                        |                 |
|                                            | Chlorine Free     |                        |                 |
|                                            | Flame Retardant   |                        |                 |
|                                            | General Purpose   |                        |                 |
| Uses                                       | General Purpose   |                        |                 |
| RoHS Compliance                            | RoHS Compliant    |                        |                 |
| Appearance                                 | Clear/Transparent |                        |                 |
|                                            | Colors Available  |                        |                 |
| Processing Method                          | Injection Molding |                        |                 |
| 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) | 13.0              | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage - Flow <sup>1</sup>      | 0.50 to 0.70      | %                      | Internal Method |
| Water Absorption                           |                   |                        | ISO 62          |
| Saturation, 23°C                           | 0.35              | %                      |                 |
| Equilibrium, 23°C, 50% RH                  | 0.15              | %                      |                 |
| Hardness                                   | Nominal Value     | Unit                   | Test Method     |
| Ball Indentation Hardness (H 358/30)       | 95.0              | MPa                    | ISO 2039-1      |
| Mechanical                                 | Nominal Value     | Unit                   | Test Method     |
| Tensile Modulus                            | 2350              | MPa                    | ISO 527-2/1     |
| Tensile Stress                             |                   |                        | ISO 527-2/50    |
| Yield                                      | 63.0              | MPa                    |                 |
| Break                                      | 60.0              | MPa                    |                 |
| Tensile Strain                             |                   |                        | ISO 527-2/50    |
| Yield                                      | 6.0               | %                      |                 |
| Break                                      | 85                | %                      |                 |
| Flexural Modulus <sup>2</sup>              | 2300              | MPa                    | ISO 178         |
| Flexural Stress                            | 90.0              | MPa                    | ISO 178         |

| Impact                                        | Nominal Value | Unit              | Test Method    |
|-----------------------------------------------|---------------|-------------------|----------------|
| Charpy Notched Impact Strength <sup>3</sup>   |               |                   | ISO 179/1eA    |
| -30°C                                         | 14            | kJ/m <sup>2</sup> |                |
| 23°C                                          | 73            | kJ/m <sup>2</sup> |                |
| Charpy Unnotched Impact Strength <sup>4</sup> |               |                   | ISO 179/1eU    |
| -30°C                                         | No Break      |                   |                |
| 23°C                                          | No Break      |                   |                |
| Notched Izod Impact Strength <sup>5</sup>     |               |                   | ISO 180/1A     |
| -30°C                                         | 12            | kJ/m <sup>2</sup> |                |
| 23°C                                          | 70            | kJ/m <sup>2</sup> |                |
| Unnotched Izod Impact Strength <sup>6</sup>   |               |                   | ISO 180/1U     |
| -30°C                                         | No Break      |                   |                |
| 23°C                                          | No Break      |                   |                |
| Thermal                                       | Nominal Value | Unit              | Test Method    |
| Heat Deflection Temperature <sup>7</sup>      |               |                   |                |
| 0.45 MPa, Unannealed, 100 mm Span             | 135           | °C                | ISO 75-2/Be    |
| 1.8 MPa, Unannealed, 100 mm Span              | 124           | °C                | ISO 75-2/Ae    |
| Vicat Softening Temperature                   |               |                   |                |
| --                                            | 141           | °C                | ISO 306/B50    |
| --                                            | 142           | °C                | ISO 306/B120   |
| Ball Pressure Test (125°C)                    | Pass          |                   | IEC 60695-10-2 |
| CLTE                                          |               |                   | ISO 11359-2    |
| Flow : 23 to 80°C                             | 7.0E-5        | cm/cm/°C          |                |
| Transverse : 23 to 80°C                       | 7.0E-5        | cm/cm/°C          |                |
| Thermal Conductivity                          | 0.20          | W/m/K             | ISO 8302       |
| RTI Elec                                      | 130           | °C                | UL 746         |
| RTI Imp                                       | 120           | °C                | UL 746         |
| RTI Str                                       | 125           | °C                | UL 746         |
| 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 (3.20 mm, in Oil)           | 17            | kV/mm             | IEC 60243-1    |
| Relative Permittivity                         |               |                   | IEC 60250      |
| 50 Hz                                         | 2.70          |                   |                |
| 60 Hz                                         | 2.70          |                   |                |
| 1 MHz                                         | 2.70          |                   |                |
| Dissipation Factor                            |               |                   | IEC 60250      |
| 50 Hz                                         | 1.0E-3        |                   |                |
| 60 Hz                                         | 1.0E-3        |                   |                |
| 1 MHz                                         | 0.010         |                   |                |
| Comparative Tracking Index (CTI)              | PLC 2         |                   | UL 746         |
| Flammability                                  | Nominal Value | Unit              | Test Method    |

|                                          |                 |      |                |
|------------------------------------------|-----------------|------|----------------|
| Flame Rating                             |                 |      | UL 94          |
| 1.50 mm                                  | V-2             |      |                |
| 3.00 mm                                  | V-0             |      |                |
| Glow Wire Flammability Index (1.00 mm)   | 960             | °C   | IEC 60695-2-12 |
| Glow Wire Ignition Temperature (1.00 mm) | 850             | °C   | IEC 60695-2-13 |
| Oxygen Index                             | 35              | %    | ISO 4589-2     |
| Optical                                  | Nominal Value   | Unit | Test Method    |
| Refractive Index                         | 1.586           |      | ISO 489        |
| Transmittance (2540 μm)                  | 88.0            | %    | ASTM D1003     |
| Injection                                | Nominal Value   | Unit |                |
| Drying Temperature                       | 120             | °C   |                |
| Drying Time                              | 2.0 to 4.0      | hr   |                |
| Suggested Max Moisture                   | 0.020           | %    |                |
| Hopper Temperature                       | 60.0 to 80.0    | °C   |                |
| Rear Temperature                         | 260 to 280      | °C   |                |
| Middle Temperature                       | 270 to 290      | °C   |                |
| Front Temperature                        | 280 to 310      | °C   |                |
| Nozzle Temperature                       | 270 to 290      | °C   |                |
| Processing (Melt) Temp                   | 280 to 310      | °C   |                |
| Mold Temperature                         | 80.0 to 110     | °C   |                |
| NOTE                                     |                 |      |                |
| 1.                                       | Tensile Bar     |      |                |
| 2.                                       | 2.0 mm/min      |      |                |
| 3.                                       | 80*10*3 sp=62mm |      |                |
| 4.                                       | 80*10*3 sp=62mm |      |                |
| 5.                                       | 80*10*3         |      |                |
| 6.                                       | 80*10*3         |      |                |
| 7.                                       | 120*10*4 mm     |      |                |

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