

Lexan* Resin SP1010R

Americas: LIMITED USE

Superior performance, improved flow over standard grades at lower temperatures. Internal mold release.

Property

| TYPICAL PROPERTIES ⁽¹⁾ | | | |
|--|-----------|-----------|--------------|
| MECHANICAL | Value | Unit | Standard |
| Tensile Stress, yld, Type I, 50 mm/min | 58 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 5.4 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 110 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2060 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 89 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2370 | MPa | ASTM D 790 |
| Hardness, Rockwell R | 124 | - | ASTM D 785 |
| Taber Abrasion, CS-17, 1 kg | 26 | mg/1000cy | ASTM D 1044 |
| IMPACT | Value | Unit | Standard |
| Izod Impact, notched, 23°C | 640 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 61 | J | ASTM D 3763 |
| THERMAL | Value | Unit | Standard |
| Vicat Softening Temp, Rate B/50 | 126 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 115 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 107 | °C | ASTM D 648 |
| Relative Temp Index, Elec | 110 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 100 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 110 | °C | UL 746B |
| PHYSICAL | Value | Unit | Standard |
| Specific Gravity | 1.18 | - | ASTM D 792 |
| Water Absorption, 24 hours | 0.13 | % | ASTM D 570 |
| Water Absorption, equilibrium, 23C | 0.3 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 - 0.7 | % | SABIC Method |
| OPTICAL | Value | Unit | Standard |
| Light Transmission | 88 | % | ASTM D 1003 |
| Haze | 1 | % | ASTM D 1003 |
| Refractive Index | 1.582 | - | ASTM D 542 |
| ELECTRICAL | Value | Unit | Standard |
| Arc Resistance, Tungsten {PLC} | 5 | PLC Code | ASTM D 495 |
| Hot Wire Ignition {PLC} | 2 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 2 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 0 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 3 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | Value | Unit | Standard |
| UL Recognized, 94HB Flame Class Rating (3) | 1.06 | mm | UL 94 |
| CSA (See File for complete listing) | LS88480 | File No. | CSA LISTED |

Source GMD, last updated:01/04/2000

Processing

| Parameter | Value | Unit |
|-----------------------------|---------------|------|
| Injection Molding | | |
| Drying Temperature | 105 - 110 | °C |
| Drying Time | 3 - 4 | hrs |
| Drying Time (Cumulative) | 24 | hrs |
| Melt Temperature | 260 - 305 | °C |
| Nozzle Temperature | 255 - 300 | °C |
| Front - Zone 3 Temperature | 260 - 305 | °C |
| Middle - Zone 2 Temperature | 250 - 295 | °C |
| Rear - Zone 1 Temperature | 240 - 280 | °C |
| Mold Temperature | 50 - 80 | °C |
| Back Pressure | 0.3 - 0.7 | MPa |
| Screw Speed | 35 - 75 | rpm |
| Shot to Cylinder Size | 40 - 60 | % |
| Vent Depth | 0.038 - 0.076 | mm |

Source GMD, last updated:01/04/2000

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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°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.

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