

## SABIC Innovative Plastics Lexan® 923X PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Lexan®923x is a UV stabilized high flow impact modified injection molding (IM) grade. This resin offers UL94 V0 @ 1.5mm flame retardancy based on non-bromine, non-chlorine FR systems, low temperature ductility characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. Lexan 923x resin is a product available in a wide range of opaque colors and may be an excellent candidate for a wide range of applications.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-923X-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-923X-PC.php)

| Physical Properties         | Metric                                              | English                                             | Comments     |
|-----------------------------|-----------------------------------------------------|-----------------------------------------------------|--------------|
| Specific Gravity            | 1.19 g/cc                                           | 1.19 g/cc                                           | ASTM D792    |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0080 cm/cm<br>@Thickness 3.20 mm         | 0.0040 - 0.0080 in/in<br>@Thickness 0.126 in        | SABIC Method |
| Melt Flow                   | 16 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 16 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | ASTM D1238   |

| Mechanical Properties     | Metric                             | English                                | Comments                          |
|---------------------------|------------------------------------|----------------------------------------|-----------------------------------|
| Tensile Strength at Break | 60.0 MPa                           | 8700 psi                               | Type I, 50 mm/min; ASTM D638      |
| Tensile Strength, Yield   | 58.0 MPa                           | 8410 psi                               | Type I, 50 mm/min; ASTM D638      |
| Elongation at Break       | 110 %                              | 110 %                                  | Type I, 50 mm/min; ASTM D638      |
| Elongation at Yield       | 6.0 %                              | 6.0 %                                  | Type I, 50 mm/min; ASTM D638      |
| Tensile Modulus           | 2.10 GPa                           | 305 ksi                                | 5 mm/min; ASTM D638               |
| Flexural Yield Strength   | 90.0 MPa                           | 13100 psi                              | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus          | 2.40 GPa                           | 348 ksi                                | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched      | 7.75 J/cm                          | 14.5 ft-lb/in                          | ASTM D256                         |
|                           | 6.50 J/cm<br>@Temperature -30.0 °C | 12.2 ft-lb/in<br>@Temperature -22.0 °F | ASTM D256                         |
| Dart Drop, Total Energy   | 65.0 J<br>@Temperature 23.0 °C     | 47.9 ft-lb<br>@Temperature 73.4 °F     | ASTM D3763                        |

| Thermal Properties                          | Metric                                           | English                                            | Comments              |
|---------------------------------------------|--------------------------------------------------|----------------------------------------------------|-----------------------|
| CTE, linear, Parallel to Flow               | 61.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ | 33.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ | ASTM E 831            |
|                                             | @Temperature -40.0 - 40.0 $^{\circ}\text{C}$     | @Temperature -40.0 - 104 $^{\circ}\text{F}$        |                       |
| CTE, linear, Transverse to Flow             | 62.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ | 34.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ | ASTM E 831            |
|                                             | @Temperature -40.0 - 40.0 $^{\circ}\text{C}$     | @Temperature -40.0 - 104 $^{\circ}\text{F}$        |                       |
| Deflection Temperature at 1.8 MPa (264 psi) | 123 $^{\circ}\text{C}$                           | 253 $^{\circ}\text{F}$                             | unannealed; ASTM D648 |
|                                             | @Thickness 3.20 mm                               | @Thickness 0.126 in                                |                       |
| Vicat Softening Point                       | 140 $^{\circ}\text{C}$                           | 284 $^{\circ}\text{F}$                             | Rate B/50; ASTM D1525 |
| UL RTI, Electrical                          | 125 $^{\circ}\text{C}$                           | 257 $^{\circ}\text{F}$                             | UL 746B               |
| UL RTI, Mechanical with Impact              | 115 $^{\circ}\text{C}$                           | 239 $^{\circ}\text{F}$                             | UL 746B               |
| UL RTI, Mechanical without Impact           | 120 $^{\circ}\text{C}$                           | 248 $^{\circ}\text{F}$                             | UL 746B               |
| Flammability, UL94                          | V-0                                              | V-0                                                | UL 94                 |
|                                             | @Thickness 1.50 mm                               | @Thickness 0.0591 in                               |                       |
|                                             | 5VA                                              | 5VA                                                | UL 94                 |
|                                             | @Thickness 3.00 mm                               | @Thickness 0.118 in                                |                       |
| Glow Wire Test                              | 825 $^{\circ}\text{C}$                           | 1520 $^{\circ}\text{F}$                            | IEC 60695-2-13        |
|                                             | 825 $^{\circ}\text{C}$                           | 1520 $^{\circ}\text{F}$                            | IEC 60695-2-13        |
|                                             | 960 $^{\circ}\text{C}$                           | 1760 $^{\circ}\text{F}$                            | IEC 60695-2-12        |
|                                             | @Thickness 1.50 mm                               | @Thickness 0.0591 in                               |                       |

## Contact Songhan Plastic Technology Co.,Ltd.

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