

## SABIC Innovative Plastics Lexan® 201R PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

7.0 MFR, for thicker sections without sinks. Improved flame retardance. Internal mold release.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-201R-PC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-201R-PC-Asia-Pacific.php)

| Physical Properties                | Metric                            | English                           | Comments     |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| Specific Gravity                   | 1.20 g/cc                         | 1.20 g/cc                         | ASTM D792    |
| Density                            | 1.19 g/cc                         | 0.0430 lb/in <sup>3</sup>         | ASTM D792    |
| Water Absorption                   | 0.15 %                            | 0.15 %                            | ASTM D570    |
|                                    | @Time 86400 sec                   | @Time 24.0 hour                   |              |
| Moisture Absorption at Equilibrium | 0.35 %                            | 0.35 %                            | ASTM D570    |
|                                    | 0.58 %                            | 0.58 %                            | ASTM D570    |
|                                    | @Temperature 100 °C               | @Temperature 212 °F               |              |
| Linear Mold Shrinkage, Flow        | 0.0050 - 0.0070 cm/cm             | 0.0050 - 0.0070 in/in             | SABIC Method |
|                                    | @Thickness 3.20 mm                | @Thickness 0.126 in               |              |
| Melt Flow                          | 7.0 g/10 min                      | 7.0 g/10 min                      | ASTM D1238   |
|                                    | @Load 1.20 kg, Temperature 300 °C | @Load 2.65 lb, Temperature 572 °F |              |

| Mechanical Properties     | Metric    | English       | Comments                          |
|---------------------------|-----------|---------------|-----------------------------------|
| Hardness, Rockwell M      | 70        | 70            | ASTM D785                         |
| Hardness, Rockwell R      | 118       | 118           | ASTM D785                         |
| Tensile Strength at Break | 68.0 MPa  | 9860 psi      | Type I, 50 mm/min; ASTM D638      |
| Tensile Strength, Yield   | 62.0 MPa  | 8990 psi      | Type I, 50 mm/min; ASTM D638      |
| Elongation at Break       | 135 %     | 135 %         | Type I, 50 mm/min; ASTM D638      |
| Elongation at Yield       | 7.0 %     | 7.0 %         | Type I, 50 mm/min; ASTM D638      |
| Flexural Yield Strength   | 97.0 MPa  | 14100 psi     | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus          | 2.34 GPa  | 339 ksi       | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched      | 9.07 J/cm | 17.0 ft-lb/in | ASTM D256                         |

| <b>Mechanical Properties</b>   | <b>Metric</b>         | <b>English</b>            | <b>Comments</b>                               |
|--------------------------------|-----------------------|---------------------------|-----------------------------------------------|
| Tensile Impact Strength        | 630 kJ/m <sup>2</sup> | 300 ft-lb/in <sup>2</sup> | Type S; ASTM D1822                            |
| Dart Drop, Total Energy        | 64.0 J                | 47.2 ft-lb                | Instrumented Impact Energy @ peak; ASTM D3763 |
|                                | 169 J                 | 125 ft-lb                 | ASTM D3029                                    |
| Taber Abrasion, mg/1000 Cycles | 10                    | 10                        | CS-17, 1 kg; ASTM D1044                       |

| <b>Thermal Properties</b>                   | <b>Metric</b>                                | <b>English</b>                                | <b>Comments</b>       |
|---------------------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------|
| CTE, linear, Parallel to Flow               | 68.4 µm/m-°C<br>@Temperature -40.0 - 95.0 °C | 38.0 µin/in-°F<br>@Temperature -40.0 - 203 °F | ASTM E 831            |
| Specific Heat Capacity                      | 1.25 J/g-°C                                  | 0.299 BTU/lb-°F                               | ASTM C351             |
| Thermal Conductivity                        | 0.290 W/m-K                                  | 2.01 BTU-in/hr-ft <sup>2</sup> -°F            | ASTM C177             |
| Deflection Temperature at 0.46 MPa (66 psi) | 137 °C<br>@Thickness 6.40 mm                 | 279 °F<br>@Thickness 0.252 in                 | unannealed; ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 132 °C<br>@Thickness 6.40 mm                 | 270 °F<br>@Thickness 0.252 in                 | unannealed; ASTM D648 |
| Vicat Softening Point                       | 154 °C                                       | 309 °F                                        | Rate B/50; ASTM D1525 |
| UL RTI, Electrical                          | 130 °C                                       | 266 °F                                        | UL 746B               |
| UL RTI, Mechanical with Impact              | 130 °C                                       | 266 °F                                        | UL 746B               |
| UL RTI, Mechanical without Impact           | 130 °C                                       | 266 °F                                        | UL 746B               |
| Flammability, UL94                          | V-2<br>@Thickness 1.09 mm                    | V-2<br>@Thickness 0.0429 in                   | UL 94                 |
|                                             | V-0<br>@Thickness 5.99 mm                    | V-0<br>@Thickness 0.236 in                    | UL 94                 |

| <b>Optical Properties</b> | <b>Metric</b>               | <b>English</b>               | <b>Comments</b>     |
|---------------------------|-----------------------------|------------------------------|---------------------|
| Refractive Index          | 1.586                       | 1.586                        | ASTM D542           |
| Haze                      | 1.0 %<br>@Thickness 2.54 mm | 1.0 %<br>@Thickness 0.100 in | ASTM D1003          |
| Transmission, Visible     | 88 %                        | 88 %                         | 2.54 mm; ASTM D1003 |

| Electrical Properties                | Metric                            | English                           | Comments          |
|--------------------------------------|-----------------------------------|-----------------------------------|-------------------|
| Volume Resistivity                   | $\geq 1.00 \times 10^{17}$ ohm-cm | $\geq 1.00 \times 10^{17}$ ohm-cm | ASTM D257         |
| Dielectric Constant                  | 2.96                              | 2.96                              | ASTM D150         |
|                                      | @Frequency 1.00e+6 Hz             | @Frequency 1.00e+6 Hz             |                   |
|                                      | 3.17                              | 3.17                              | ASTM D150         |
|                                      | @Frequency 50.0 - 60.0 Hz         | @Frequency 50.0 - 60.0 Hz         |                   |
| Dielectric Strength                  | 14.9 kV/mm                        | 378 kV/in                         | in air; ASTM D149 |
|                                      | @Thickness 3.20 mm                | @Thickness 0.126 in               |                   |
| Dissipation Factor                   | 0.00090                           | 0.00090                           | ASTM D150         |
|                                      | @Frequency 50.0 - 60.0 Hz         | @Frequency 50.0 - 60.0 Hz         |                   |
|                                      | 0.010                             | 0.010                             | ASTM D150         |
|                                      | @Frequency 1.00e+6 Hz             | @Frequency 1.00e+6 Hz             |                   |
| Comparative Tracking Index           | 250 - 400 V                       | 250 - 400 V                       | UL 746A           |
| Hot Wire Ignition, HWI               | 30 - 60 sec                       | 30 - 60 sec                       | UL 746A           |
| High Amp Arc Ignition, HAI           | 60 - 120 arcs                     | 60 - 120 arcs                     | UL 746A           |
| High Voltage Arc-Tracking Rate, HVTR | 25.4 - 80.0 mm/min                | 1.00 - 3.15 in/min                | UL 746A           |

| Descriptive Properties             | Value                  | Comments  |
|------------------------------------|------------------------|-----------|
| Specific Volume                    | 0.83cm <sup>3</sup> /g | ASTM D792 |
| UV-light, water exposure/immersion | F2                     | UL 746C   |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China