

## SABIC Innovative Plastics Lexan® 244R PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

LEXAN 244R resin grade is a medium viscosity multi purpose product with improved flame resistance and release properties. It is also US FDA food contact compliant available in limited colors This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-244R-PC-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-244R-PC-Europe-Africa-Middle-East.php)

| Physical Properties                | Metric                                              | English                                             | Comments                                             |
|------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------------------|
| Density                            | 1.20 g/cc                                           | 0.0434 lb/in <sup>3</sup>                           | ISO 1183                                             |
| Moisture Absorption at Equilibrium | 0.15 %                                              | 0.15 %                                              | 23°C / 50% RH; ISO 62                                |
| Water Absorption at Saturation     | 0.35 %<br>@Temperature 23.0 °C                      | 0.35 %<br>@Temperature 73.4 °F                      | ISO 62                                               |
| Linear Mold Shrinkage, Flow        | 0.0050 - 0.0070 cm/cm                               | 0.0050 - 0.0070 in/in                               | on tensile bar; SABIC Method                         |
| Melt Flow                          | 12 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 12 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | [cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133 |

| Mechanical Properties      | Metric                                          | English                                             | Comments            |
|----------------------------|-------------------------------------------------|-----------------------------------------------------|---------------------|
| Hardness, H358/30          | 95.0 MPa                                        | 13800 psi                                           | ISO 2039-1          |
| Tensile Strength at Break  | 70.0 MPa                                        | 10200 psi                                           | 50 mm/min; ISO 527  |
| Tensile Strength, Yield    | 63.0 MPa                                        | 9140 psi                                            | 50 mm/min; ISO 527  |
| Elongation at Break        | 110 %                                           | 110 %                                               | 50 mm/min; ISO 527  |
| Elongation at Yield        | 6.0 %                                           | 6.0 %                                               | 50 mm/min; ISO 527  |
| Tensile Modulus            | 2.35 GPa                                        | 341 ksi                                             | 1 mm/min; ISO 527   |
| Flexural Yield Strength    | 90.0 MPa                                        | 13100 psi                                           | 2 mm/min; ISO 178   |
| Flexural Modulus           | 2.30 GPa                                        | 334 ksi                                             | 2 mm/min; ISO 178   |
| Izod Impact, Notched (ISO) | 12.0 kJ/m <sup>2</sup><br>@Temperature -30.0 °C | 5.71 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | 80*10*3; ISO 180/1A |
|                            | 70.0 kJ/m <sup>2</sup><br>@Temperature 23.0 °C  | 33.3 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F  | 80*10*3; ISO 180/1A |
|                            | NB                                              | NB                                                  |                     |

| Izod Impact, Unnotched (ISO)   |                       | English               |                       | 80*10*3; ISO 180/1U                        |
|--------------------------------|-----------------------|-----------------------|-----------------------|--------------------------------------------|
| Mechanical Properties          | Metric                |                       | @ Temperature 73.4 °F | Comments                                   |
|                                | NB                    | NB                    |                       | 80*10*3; ISO 180/1U                        |
|                                | @Temperature -30.0 °C | @Temperature -22.0 °F |                       |                                            |
| Charpy Impact Unnotched        | NB                    | NB                    |                       | Edgew 80*10*3 sp=62mm; ISO 179/1eU         |
|                                | @Temperature 23.0 °C  | @Temperature 73.4 °F  |                       |                                            |
|                                | NB                    | NB                    |                       | Edgew 80*10*3 sp=62mm; ISO 179/1eU         |
|                                | @Temperature -30.0 °C | @Temperature -22.0 °F |                       |                                            |
| Charpy Impact, Notched         | 1.40 J/cm²            | 6.66 ft-lb/in²        |                       | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                                | @Temperature -30.0 °C | @Temperature -22.0 °F |                       |                                            |
|                                | 3.50 J/cm²            | 16.7 ft-lb/in²        |                       | ISO 179/2C                                 |
|                                | @Temperature 23.0 °C  | @Temperature 73.4 °F  |                       |                                            |
|                                | 7.30 J/cm²            | 34.7 ft-lb/in²        |                       | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                                | @Temperature 23.0 °C  | @Temperature 73.4 °F  |                       |                                            |
| Taber Abrasion, mg/1000 Cycles | 10                    | 10                    |                       | CS-17; SABIC Method                        |
|                                | @Load 1.00 kg         | @Load 2.20 lb         |                       |                                            |

| Thermal Properties                          | Metric                      | English                    | Comments                           |
|---------------------------------------------|-----------------------------|----------------------------|------------------------------------|
| CTE, linear, Parallel to Flow               | 70.0 µm/m-°C                | 38.9 µin/in-°F             | ISO 11359-2                        |
|                                             | @Temperature 23.0 - 80.0 °C | @Temperature 73.4 - 176 °F |                                    |
| Thermal Conductivity                        | 0.200 W/m-K                 | 1.39 BTU-in/hr-ft²-°F      | ISO 8302                           |
| Deflection Temperature at 0.46 MPa (66 psi) | 136 °C                      | 277 °F                     | Edgew 120*10*4 sp=100mm; ISO 75/Be |
| Deflection Temperature at 1.8 MPa (264 psi) | 125 °C                      | 257 °F                     | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| Vicat Softening Point                       | 141 °C                      | 286 °F                     | Rate B/50; ISO 306                 |
|                                             | 142 °C                      | 288 °F                     | Rate B/120; ISO 306                |
|                                             | 153 °C                      | 307 °F                     | Rate A/50; ISO 306                 |
| Flammability, UL94                          | V-2                         | V-2                        | UL 94 by SABIC-IP                  |
|                                             | @Thickness 1.14 mm          | @Thickness 0.0449 in       |                                    |
|                                             | V-0                         | V-0                        | UL 94 by SABIC-IP                  |
|                                             | @Thickness 6.10 mm          | @Thickness 0.240 in        |                                    |

| Oxygen Index<br>Thermal Properties | 25 %<br>Metric               | 25 %<br>English                 | LOI: ISO 4589<br>Comments                    |
|------------------------------------|------------------------------|---------------------------------|----------------------------------------------|
| Glow Wire Test                     | 850 °C<br>@Thickness 1.00 mm | 1560 °F<br>@Thickness 0.0394 in | Glow Wire Flammability Index; IEC 60695-2-12 |

| Optical Properties    | Metric                          | English                          | Comments    |
|-----------------------|---------------------------------|----------------------------------|-------------|
| Refractive Index      | 1.586                           | 1.586                            | ISO 489     |
| Haze                  | <= 0.80 %<br>@Thickness 2.54 mm | <= 0.80 %<br>@Thickness 0.100 in | ASTM D 1003 |
| Transmission, Visible | 88 - 90 %<br>@Thickness 2.54 mm | 88 - 90 %<br>@Thickness 0.100 in | ASTM D 1003 |

| Electrical Properties | Metric                              | English                             | Comments                |
|-----------------------|-------------------------------------|-------------------------------------|-------------------------|
| Volume Resistivity    | >= 1.00e+15 ohm-cm                  | >= 1.00e+15 ohm-cm                  | IEC 60093               |
| Surface Resistance    | >= 1.00e+15 ohm                     | >= 1.00e+15 ohm                     | ROA; IEC 60093          |
| Dielectric Constant   | 2.7<br>@Frequency 1.00e+6 Hz        | 2.7<br>@Frequency 1.00e+6 Hz        | IEC 60250               |
|                       | 2.7<br>@Frequency 50.0 - 60.0 Hz    | 2.7<br>@Frequency 50.0 - 60.0 Hz    | IEC 60250               |
| Dielectric Strength   | 15.0 kV/mm<br>@Thickness 1.00 mm    | 381 kV/in<br>@Thickness 0.0394 in   | short time; IEC 60243-1 |
|                       | 17.0 kV/mm<br>@Thickness 3.20 mm    | 432 kV/in<br>@Thickness 0.126 in    | in oil; IEC 60243-1     |
|                       | 27.0 kV/mm<br>@Thickness 1.60 mm    | 686 kV/in<br>@Thickness 0.0630 in   | in oil; IEC 60243-1     |
|                       | 35.0 kV/mm<br>@Thickness 0.800 mm   | 889 kV/in<br>@Thickness 0.0315 in   | in oil; IEC 60243-1     |
| Dissipation Factor    | 0.0010<br>@Frequency 50.0 - 60.0 Hz | 0.0010<br>@Frequency 50.0 - 60.0 Hz | IEC 60250               |
|                       | 0.010<br>@Frequency 1.00e+6 Hz      | 0.010<br>@Frequency 1.00e+6 Hz      | IEC 60250               |

| Electrical Properties             | Metric | English | Comments       |
|-----------------------------------|--------|---------|----------------|
| Descriptive Properties            |        | Value   | Comments       |
| Ball Pressure Test, 125°C +/- 2°C |        | PASSES  | IEC 60695-10-2 |

**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