

## SABIC Innovative Plastics Lexan® FXE123R PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

LEXAN FXE123R is a transparent/translucent, UV stabilised low viscosity grade for special effects colors with a fluorescent appearance.

Color package may affect performance. 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-FXE123R-PC-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXE123R-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                          | 21 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 21 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  | 65.0 MPa  | 9430 psi  | 50 mm/min; ISO 527  |
| Tensile Strength, Yield    | 63.0 MPa  | 9140 psi  | 50 mm/min; ISO 527  |
| Elongation at Break        | 100 %   | 100 %   | 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) | 11.0 kJ/m <sup>2</sup><br>@Temperature -30.0 °C | 5.23 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | 80*10*3; ISO 180/1A |
|                            | 65.0 kJ/m <sup>2</sup><br>@Temperature 23.0 °C  | 30.9 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F  | 80*10*3; ISO 180/1A |
|                            | NB  | NB  |                     |

| Impact Properties           | Metric                 | English                    | Comments                                   |
|-----------------------------|------------------------|----------------------------|--|
| Izod Impact Unnotched (ISO) | NB                     | NB                         | 80*10*3; ISO 180/1U                        |
|                             | @Temperature 23.0 °C   | @Temperature 73.4 °F       |  |
| Charpy Impact Unnotched     | NB                     | NB                         | Edgew 80*10*3 sp=62mm; ISO 179/1eU         |
|                             | @Temperature 23.0 °C   | @Temperature 73.4 °F       |  |
| Charpy Impact, Notched      | NB                     | NB                         | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                             | @Temperature -30.0 °C  | @Temperature -22.0 °F      |  |
| Charpy Impact, Notched      | 1.20 J/cm <sup>2</sup> | 5.71 ft-lb/in <sup>2</sup> | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                             | @Temperature -30.0 °C  | @Temperature -22.0 °F      |  |
| Charpy Impact, Notched      | 6.50 J/cm <sup>2</sup> | 30.9 ft-lb/in <sup>2</sup> | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                             | @Temperature 23.0 °C   | @Temperature 73.4 °F       |  |

| 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 |                                    |
| Deflection Temperature at 1.8 MPa (264 psi) | 122 °C                      | 252 °F                     | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| Vicat Softening Point                       | 140 °C                      | 284 °F                     | Rate B/50; ISO 306                 |
|   | 141 °C                      | 286 °F                     | Rate B/120; ISO 306                |

| Optical Properties    | Metric | English | Comments  |
|-----------------------|--------|---------|---|
| Transmission, Visible | 80 %   | 80 %    | transparent/translucent; thickness not quantified |

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

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