

**SABIC Innovative Plastics LNP FARADEx WX94736 PBT**

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

**Material Notes:**

LNP\* Faradex\* WX94736 is a compound based on Polybutylene Terephthalate resin containing Stainless Steel.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-FARADEx-WX94736-PBT.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-FARADEx-WX94736-PBT.php)

| Physical Properties               | Metric               | English                   | Comments                  |
|-----------------------------------|----------------------|---------------------------|---------------------------|
| Density                           | 1.50 g/cc            | 0.0542 lb/in <sup>3</sup> | ISO 1183                  |
|                                   | 1.51 g/cc            | 0.0546 lb/in <sup>3</sup> | ASTM D792                 |
| Moisture Absorption               | 0.100 %              | 0.100 %                   | 50% RH, 24 hrs; ASTM D570 |
| Linear Mold Shrinkage, Flow       | 0.0089 cm/cm         | 0.0089 in/in              | ISO 294                   |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |
|                                   | 0.0080 - 0.010 cm/cm | 0.0080 - 0.010 in/in      | ASTM D955                 |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |
| Linear Mold Shrinkage, Transverse | 0.010 - 0.012 cm/cm  | 0.010 - 0.012 in/in       | ASTM D955                 |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |
|                                   | 0.011 cm/cm          | 0.011 in/in               | ISO 294                   |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |

| Mechanical Properties     | Metric   | English  | Comments             |
|---------------------------|----------|----------|----------------------|
| Tensile Strength at Break | 53.0 MPa | 7690 psi | ASTM D638            |
|                           | 53.0 MPa | 7690 psi | ISO 527              |
| Tensile Strength, Yield   | 53.0 MPa | 7690 psi | ASTM D638            |
|                           | 53.0 MPa | 7690 psi | ISO 527              |
| Elongation at Break       | 2.8 %    | 2.8 %    | ASTM D638            |
|                           | 2.9 %    | 2.9 %    | ISO 527              |
| Elongation at Yield       | 2.7 %    | 2.7 %    | ASTM D638            |
|                           | 2.8 %    | 2.8 %    | ISO 527              |
| Tensile Modulus           | 3.11 GPa | 451 ksi  | 1 mm/min; ISO 527    |
|                           | 3.44 GPa | 499 ksi  | 50 mm/min; ASTM D638 |

| Mechanical Properties        | 55.0 MPa<br>Metric     | 7880 psi<br>English        | ASTM D790<br>Comments                            |
|------------------------------|------------------------|----------------------------|--|
|                              | 83.0 MPa               | 12000 psi                  | ISO 178  |
| Flexural Modulus             | 2.75 GPa               | 399 ksi                    | ASTM D790  |
|                              | 3.10 GPa               | 450 ksi                    | ISO 178  |
| Izod Impact, Notched         | 0.580 J/cm             | 1.09 ft-lb/in              | ASTM D256  |
| Izod Impact, Unnotched       | 6.14 J/cm              | 11.5 ft-lb/in              | ASTM D4812                                       |
| Izod Impact, Notched (ISO)   | 6.00 kJ/m <sup>2</sup> | 2.86 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1A                              |
| Izod Impact, Unnotched (ISO) | 22.0 kJ/m <sup>2</sup> | 10.5 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1U                              |
| Dart Drop, Total Energy      | 6.00 J                 | 4.43 ft-lb                 | Instrumented Impact Energy @ peak;<br>ASTM D3763 |
| Impact Test                  | 1.00 J                 | 0.738 ft-lb                | Multiaxial Impact; ISO 6603                      |

| Thermal Properties                          | Metric                        | English                       | Comments                          |
|---|-------------------------------|-------------------------------|-----------------------------------|
| CTE, linear, Parallel to Flow               | 82.8 µm/m-°C                  | 46.0 µin/in-°F                | ASTM E 831                        |
|   | @Temperature -40.0 - 40.0 °C  | @Temperature -40.0 - 104 °F   |                                   |
|   | 83.0 µm/m-°C                  | 46.1 µin/in-°F                | ISO 11359-2                       |
|   | @Temperature -40.0 - 40.0 °C  | @Temperature -40.0 - 104 °F   |                                   |
| CTE, linear, Transverse to Flow             | 68.4 µm/m-°C                  | 38.0 µin/in-°F                | ASTM E 831                        |
|   | @Temperature -40.0 - 40.0 °C  | @Temperature -40.0 - 104 °F   |                                   |
| Deflection Temperature at 0.46 MPa (66 psi) | 69.0 µm/m-°C                  | 38.3 µin/in-°F                | ISO 11359-2                       |
|   | @Temperature -40.0 - 40.0 °C  | @Temperature -40.0 - 104 °F   |                                   |
| Deflection Temperature at 0.46 MPa (66 psi) | 147 °C                        | 297 °F                        | Flatw 80*10*4 sp=64mm; ISO 75/Bf  |
|   | 143 °C<br>@Thickness 3.20 mm  | 289 °F<br>@Thickness 0.126 in | unannealed; ASTM D648             |
| Deflection Temperature at 1.8 MPa (264 psi) | 123 °C                        | 253 °F                        | Flatw 80*10*4 sp=64mm; ISO 75/ Af |
|   | 99.0 °C<br>@Thickness 3.20 mm | 210 °F<br>@Thickness 0.126 in | unannealed; ASTM D648             |

| Electrical Properties | Metric           | English          | Comments  |
|-----------------------|------------------|------------------|-----------|
| Volume Resistivity    | 3.0 - 7.0 ohm-cm | 3.0 - 7.0 ohm-cm | ASTM D257 |
| Surface Resistance    | 2.0 - 6.0 ohm    | 2.0 - 6.0 ohm    | ASTM D257 |

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