

## Technical Data Sheet

### *Perlex* R5563 BLK 2-0833 EF



Polycarbonate

#### Product Description

*Perlex* R5563 BLACK 2-0833 EF is a Polycarbonate material. Features include: UV Resistant.

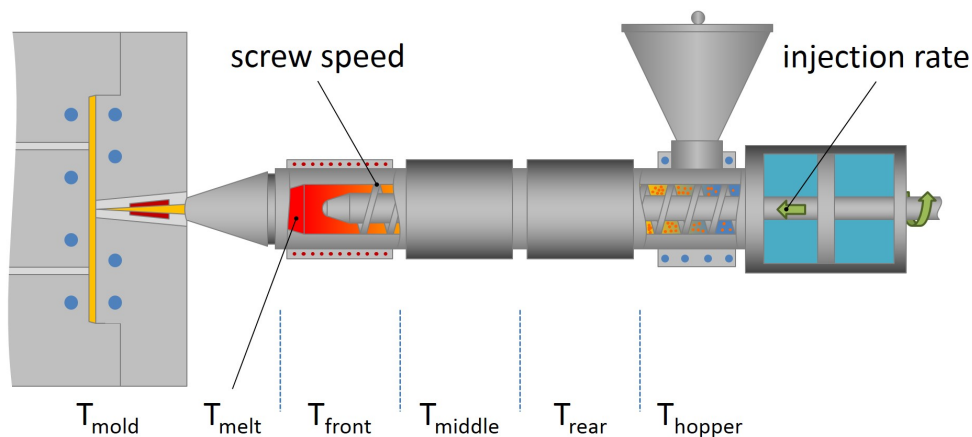
#### Regulatory Status

For regulatory compliance information, see *Perlex* R5563 BLK 2-0833 EF [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

|                     |                                                                        |
|---------------------|------------------------------------------------------------------------|
| <b>Status</b>       | Commercial: Active                                                     |
| <b>Availability</b> | Africa-Middle East; Asia-Pacific; Europe; Latin America; North America |
| <b>Attribute</b>    | UV Resistant                                                           |
| <b>Appearance</b>   | Opaque                                                                 |
| <b>Additive</b>     | Flame Retardant; UV Stabilizer                                         |
| <b>Application</b>  | Electrical Parts                                                       |

| Typical Properties                                      | Nominal Value | Units             | Test Method |
|---------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                         |               |                   |             |
| Melt Flow Rate, (300 °C/1.2 kg)                         | 12            | g/10 min          | ISO 1133    |
| Density                                                 | 1.2           | g/cm <sup>3</sup> | ISO 1183    |
| <b>Mechanical</b>                                       |               |                   |             |
| Tensile Stress at Yield                                 | 60            | MPa               | ISO 527-2   |
| Tensile Strain at Break                                 | >50           | %                 | ISO 527-2   |
| Flexural Modulus                                        | 2400          | MPa               | ISO 178     |
| Tensile Strain at Yield                                 | 5             | %                 | ISO 527-2   |
| Tensile Stress at Break                                 | 48            | MPa               | ISO 527-2   |
| Tensile Modulus                                         | 2300          | MPa               | ISO 527-1   |
| Flexural Stress                                         | 95            | MPa               | ISO 178     |
| <b>Impact</b>                                           |               |                   |             |
| Charpy Impact Strength - Notched                        |               |                   |             |
| (23 °C)                                                 | 47            | kJ/m <sup>2</sup> | ISO 179     |
| (-30 °C)                                                | 11            | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Impact Strength - Unnotched                      |               |                   |             |
| (-30 °C)                                                | No Break      |                   | ISO 179     |
| (23 °C)                                                 | No Break      |                   | ISO 179     |
| Notched Izod Impact (Area), (23 °C)                     | 45.0          | kJ/m <sup>2</sup> | ASTM D256   |
| <b>Thermal</b>                                          |               |                   |             |
| Vicat Softening Temperature                             |               |                   |             |
| (B (50N), 50 °C/h)                                      | 145           | °C                | ISO 306     |
| (A (10N), 50 °C/h)                                      | 150           | °C                | ISO 306     |
| Deflection Temperature Under Load Unannealed (0.45 MPa) | 135           | °C                | ISO 75-2/B  |
| Deflection Temperature Under Load Unannealed (1.80 MPa) | 130           | °C                | ISO 75-2/A  |

|                                  |          |        |                |
|----------------------------------|----------|--------|----------------|
| RTI Elec                         |          |        |                |
| (1.5 mm)                         | 80.0     | °C     | UL 746B        |
| (3.0 mm)                         | 80.0     | °C     | UL 746B        |
| RTI Imp                          |          |        |                |
| (1.5 mm)                         | 80.0     | °C     | UL 746B        |
| (3.0 mm)                         | 80.0     | °C     | UL 746B        |
| RTI Str                          |          |        |                |
| (1.5 mm)                         | 80.0     | °C     | UL 746B        |
| (3.0 mm)                         | 80.0     | °C     | UL 746B        |
| <b>Electrical</b>                |          |        |                |
| Volume Resistivity               | >1.0E+13 | ohm*m  | IEC 62631-3-1  |
| Comparative Tracking Index (CTI) | 175      | V      | IEC 60112      |
| High Amp Arc Ignition            |          |        | UL 746A        |
| Surface Resistivity              | >1.0E+15 | ohm    | IEC 60093      |
| <b>Flammable</b>                 |          |        |                |
| Hot-wire Ignition (HWI)          |          |        | UL 746A        |
| Burning Rate                     |          |        |                |
| (2.00 mm)                        | 0.0      | mm/min | ISO 3795       |
| (2.00 mm)                        | 0.0      | mm/min | FMVSS 302      |
| Glow Wire Flammability Index     |          |        |                |
| (1.5 mm)                         | 960      | °C     | IEC 60695-2-12 |
| (3.0 mm)                         | 960      | °C     | IEC 60695-2-12 |
| Glow Wire Ignition Temperature   |          |        |                |
| (1.5 mm)                         | 850      | °C     | IEC 60695-2-13 |
| (3.0 mm)                         | 850      | °C     | IEC 60695-2-13 |
| <b>UL Information</b>            |          |        |                |
| Flame Rating                     |          |        |                |
| (1.5 mm)                         | V-0      |        | UL 94          |
| (3.0 mm)                         | V-0      |        | UL 94          |



| Injection Parameters   | Nominal Value | Units |
|------------------------|---------------|-------|
| Drying Time            | 3.0 to 4.0    | hr    |
| Drying Temperature     | 110 to 120    | °C    |
| Processing (Melt) Temp | 270 to 310    | °C    |

**Notes**

These are typical property values not to be construed as specification limits.

**Processing notes**

Melt contacting surfaces should be made of a high quality, corrosive resistant steel. Positive experiences have been made with steel qualities containing > 12% chromium.

Avoid processing at very barrel high temperatures or above the recommended melt temperature range as this can increase risk of deposit onto the tool surfaces. Avoid long residence times. At start and end of production, it is recommended to purge clean with non-flame retardant polymer or a polyolefin.

**Processing Techniques**

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

**Company Information**

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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