# LEXAN™ EXL4016H resin

Polycarbonate

SABIC Innovative Plastics

## Message:

6% GF reinforced opaque polycarbonate-siloxane copolymer with good impact strength, stiffness and hydrolytic stability.

| General Information | | | |
|---|---|---|---|
| Filler / Reinforcement | Glass fiber reinforced material, 6.0% filler by weight | | |
| Features | Rigid, good<br>Copolymer<br>Impact resistance, good<br>Hydrolysis stability | | |
| Appearance | Opacity | | |
| Processing Method | Injection molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.22 | g/cm³ | ASTM D792, ISO 1183 |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 6.6 | g/10 min | ASTM D1238 |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 6.00 | cm³/10min | ISO 1133 |
| Molding Shrinkage - Flow (3.20 mm) | 0.20 - 0.60 | % | Internal method |
| Water Absorption | | | ISO 62 |
| Saturated, 23°C | 0.12 | % | ISO 62 |
| Equilibrium, 23°C, 50% RH | 0.46 | % | ISO 62 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | | | |
| -- [1] | 3300 | MPa | ASTM D638 |
| -- | 3200 | MPa | ISO 527-2/1 |
| Tensile Strength | | | |
| Yield [2] | 55.0 | MPa | ASTM D638 |
| Yield | 55.0 | MPa | ISO 527-2/5 |
| Fracture [3] | 46.0 | MPa | ASTM D638 |
| Fracture | 47.0 | MPa | ISO 527-2/5 |
| Tensile Elongation | | | |
| Yield [4] | 4.5 | % | ASTM D638 |
| Yield | 4.6 | % | ISO 527-2/5 |
| Fracture [5] | 19 | % | ASTM D638 |
| Fracture | 15 | % | ISO 527-2/5 |
| Flexural Modulus | | | |
| 50.0mm span [6] | 2850 | MPa | ASTM D790 |

| | | | |
|---|---|---|---|
| -- [7] | 2830 | MPa | ISO 178 |
| Flexural Stress | | | |
| -- | 104 | MPa | ISO 178 |
| Yield, 50.0mm span [8] | 105 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength [9] | | | ISO 179/1eA |
| -30°C | 15 | kJ/m² | ISO 179/1eA |
| 23°C | 25 | kJ/m² | ISO 179/1eA |
| Charpy Unnotched Impact Strength [10] | | | ISO 179/1eU |
| -30°C | No Break | | ISO 179/1eU |
| 23°C | No Break | | ISO 179/1eU |
| Notched Izod Impact | | | |
| -30°C | 170 | J/m | ASTM D256 |
| 23°C | 260 | J/m | ASTM D256 |
| -30°C [11] | 10 | kJ/m² | ISO 180/1A |
| 23°C [12] | 30 | kJ/m² | ISO 180/1A |
| Unnotched Izod Impact Strength [13] | | | ISO 180/1U |
| -30°C | No Break | | ISO 180/1U |
| 23°C | No Break | | ISO 180/1U |
| Instrumented Dart Impact (23°C, Total Energy) | 39.0 | J | ASTM D3763 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | |
| 1.8 MPa, unannealed, 3.20mm | 137 | °C | ASTM D648 |
| 1.8 MPa, unannealed, 64.0mm span [14] | 134 | °C | ISO 75-2/Af |
| Vicat Softening Temperature | | | |
| -- | 146 | °C | ASTM D1525, ISO 306/B50 10 [15] |
| -- | 148 | °C | ISO 306/B120 |
| Linear thermal expansion coefficient | | | ASTM E831, ISO 11359-2 |
| Flow: -40 to 40°C | 4.8E-5 | cm/cm/°C | ASTM E831, ISO 11359-2 |
| Lateral: -40 to 40°C | 7.1E-5 | cm/cm/°C | ASTM E831, ISO 11359-2 |
| **Injection** | **Nominal Value** | **Unit** | |
| Drying Temperature | 121 | °C | |
| Drying Time | 3.0 - 4.0 | hr | |
| Drying Time, Maximum | 48 | hr | |
| Suggested Max Moisture | 0.020 | % | |
| Suggested Shot Size | 40 - 60 | % | |
| Rear Temperature | 288 - 310 | °C | |
| Middle Temperature | 299 - 321 | °C | |
| Front Temperature | 310 - 332 | °C | |
| Nozzle Temperature | 304 - 327 | °C | |
| Processing (Melt) Temp | 310 - 332 | °C | |

| | | |
|---|---|---|
| Mold Temperature | 82.2 - 116 | °C |
| Back Pressure | 0.345 - 0.689 | MPa |
| Screw Speed | 40 - 70 | rpm |
| Vent Depth | 0.025 - 0.076 | mm |

| NOTE | |
|---|---|
| 1. | 5.0 mm/min |
| 2. | Type 1, 5.0 mm/min |
| 3. | Type 1, 5.0 mm/min |
| 4. | Type 1, 5.0 mm/min |
| 5. | Type 1, 5.0 mm/min |
| 6. | 1.3 mm/min |
| 7. | 2.0 mm/min |
| 8. | 1.3 mm/min |
| 9. | 80*10*3 sp=62mm |
| 10. | 80*10*3 sp=62mm |
| 11. | 80*10*3 |
| 12. | 80*10*3 |
| 13. | 80*10*3 |
| 14. | 80*10*4 mm |
| 15. | 标准 B (120°C/h), 载荷2 (50N) |



## Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

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