



## Lexan\* Resin OQ4320

### Europe-Africa-Middle East: COMMERCIAL

LEXAN OQ4320 is a medium viscosity grade with a UV cut-off up to 400 nm and a greater optical purity than standard grades. Fields of application for this material are optical lenses, f.i. in sunglasses and sunvisors market.

| TYPICAL PROPERTIES <sup>1</sup>             | TYPICAL VALUE | UNIT              | STANDARD       |
|---------------------------------------------|---------------|-------------------|----------------|
| <b>MECHANICAL</b>                           |               |                   |                |
| Tensile Stress, yield, 50 mm/min            | 63            | MPa               | ISO 527        |
| Tensile Stress, break, 50 mm/min            | 64            | MPa               | ISO 527        |
| Tensile Strain, yield, 50 mm/min            | 6             | %                 | ISO 527        |
| Tensile Strain, break, 50 mm/min            | 120           | %                 | ISO 527        |
| Tensile Modulus, 1 mm/min                   | 2350          | MPa               | ISO 527        |
| Flexural Stress, yield, 2 mm/min            | 95            | MPa               | ISO 178        |
| Flexural Modulus, 2 mm/min                  | 2300          | MPa               | ISO 178        |
| Hardness, H358/30                           | 95            | MPa               | ISO 2039-1     |
| <b>IMPACT</b>                               |               |                   |                |
| Izod Impact, unnotched 80*10*3 +23°C        | NB            | kJ/m <sup>2</sup> | ISO 180/1U     |
| Izod Impact, unnotched 80*10*3 -30°C        | NB            | kJ/m <sup>2</sup> | ISO 180/1U     |
| Izod Impact, notched 80*10*3 +23°C          | 70            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*3 -30°C          | 12            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm  | 73            | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 14            | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm  | NB            | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | NB            | kJ/m <sup>2</sup> | ISO 179/1eU    |
| <b>THERMAL</b>                              |               |                   |                |
| Thermal Conductivity                        | 0.2           | W/m-°C            | ISO 8302       |
| CTE, 23°C to 80°C, flow                     | 7.E-05        | 1/°C              | ISO 11359-2    |
| Ball Pressure Test, 125°C +/- 2°C           | PASSES        | -                 | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50             | 141           | °C                | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 142           | °C                | ISO 306        |



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| <b>THERMAL</b>                                |               |                         |                |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm       | 136           | °C                      | ISO 75/Be      |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm       | 124           | °C                      | ISO 75/Ae      |
| <b>PHYSICAL</b>                               |               |                         |                |
| Mold Shrinkage on Tensile Bar, flow (2)       | 0.5 - 0.7     | %                       | SABIC Method   |
| Density                                       | 1.2           | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/sat)                  | 0.35          | %                       | ISO 62         |
| Moisture Absorption (23°C / 50% RH)           | 0.15          | %                       | ISO 62         |
| Melt Volume Rate, MVR at 300°C/1.2 kg         | 12            | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>OPTICAL</b>                                |               |                         |                |
| Light Transmission, 2.54 mm                   | 88 - 90       | %                       | ASTM D 1003    |
| Haze, 2.54 mm                                 | <0.8          | %                       | ASTM D 1003    |
| Refractive Index                              | 1.586         | -                       | ISO 489        |
| <b>FLAME CHARACTERISTICS</b>                  |               |                         |                |
| Glow Wire Flammability Index 850°C, passes at | 1             | mm                      | IEC 60695-2-12 |
| Oxygen Index (LOI)                            | 25            | %                       | ISO 4589       |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 120           | °C   |
| Drying Time                 | 2 - 4         | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 280 - 310     | °C   |
| Nozzle Temperature          | 270 - 290     | °C   |
| Front - Zone 3 Temperature  | 280 - 310     | °C   |
| Middle - Zone 2 Temperature | 270 - 290     | °C   |
| Rear - Zone 1 Temperature   | 260 - 280     | °C   |
| Hopper Temperature          | 60 - 80       | °C   |
| Mold Temperature            | 80 - 110      | °C   |



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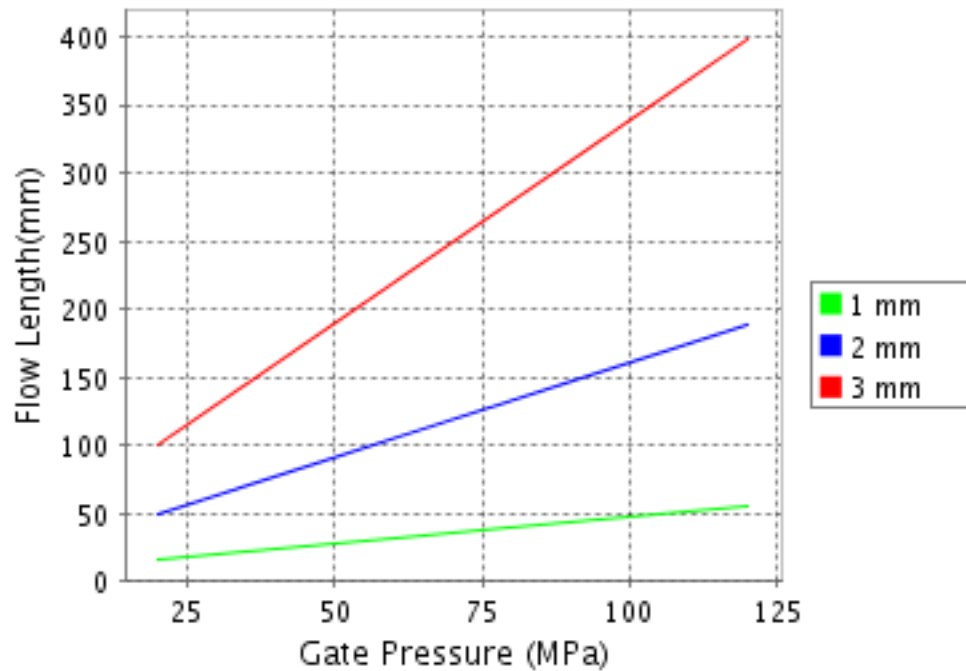
### CALCULATED FLOW LENGTH INDICATION

Moldflow<sup>®</sup> Radial Flow Analysis

Lexan<sup>®</sup> OQ4320

Melt Temperature : 295°C

Mold Temperature : 95°C



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**

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