POLYVANTIS

PRODUCT DATASHEET

# LEXAN™ EXELL™ D ST SHEET

## DESCRIPTION

LEXAN EXELL™ D ST sheet is a textured polycarbonate sheet with UV protection on both sides, offering excellent light diffusion without transparency. It has an excellent impact resistance, an excellent fire performance, ease of handling and installation and is an excellent candidate for wide variety of exterior and interior applications such as balcony and staircase glazing.

## TYPICAL PROPERTY VALUES*

| PROPERTY | TEST METHOD | UNITS | VALUE |
|---|---|---|---|
| **PHYSICAL** | | | |
| Density | ISO 1183 | g/cm³ | 1.20 |
| Water absorption, 50% RH, 23 °C | ISO 62 | % | 0.15 |
| Water absorption, saturation, 23°C | ISO 62 | % | 0.35 |
| **MECHANICAL** | | | |
| Yield stress 50 mm/min | ISO 527 | MPa | >60 |
| Yield strain 50 mm/min | ISO 527 | % | 6 |
| Nominal strain at break 50 mm/min | ISO 527 | % | >100 |
| Tensile modulus 1 mm/min | ISO 527 | MPa | 2300 |
| Flexural strength 2 mm/min | ISO 178 | MPa | 90 |
| Flexural modulus 2 mm/min | ISO 178 | MPa | 2300 |
| **IMPACT** | | | |
| Charpy impact, notched 23°C, 3.0 mm | ISO 179/1eA | kJ/m² | 75 |
| Izod impact, unnotched 23°C, 3.0 mm | ISO 180/1U | kJ/m² | NB |
| Izod impact, notched 23°C, 3.0 mm | ISO 180/1A | kJ/m² | 70 |
| **THERMAL** | | | |
| Vicat softening temperature, B/120 | ISO 306 | °C | 145 |
| Temperature of deflection under load (type A), 1.8 MPa, flat | ISO 75-2 | °C | 127 |
| Thermal conductivity | ISO 8302 | W/m.°C | 0.2 |
| Coefficient of linear thermal expansion, 23-55°C | ISO 11359-2 | 1/°C | $7x10^{-5}$ |
| Ball pressure test 125 ±2°C | IEC 60695-10-2 | - | Pass |
| **ELECTRICAL** | | | |
| Volume resistivity | IEC 60093 | Ohm.cm | $>10^{15}$ |
| Dielectric strength, in oil, 3.2 mm | IEC 60243-1 | kV/mm | 18 |

*These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local POLYVANTIS representative or the POLYVANTIS Quality Services Department.

**FIRE RATING**

| | | | |
|---|---|---|---|
| **Building & Construction** | | | |
| Europe | EN 13501-1 | - | B, s1, d0 (2-6mm) |

## FIRE PERFORMANCE

LEXAN™ EXELL™ D ST sheet has a good fire performance against many national fire codes dependant on thickness and color; please check with the local sales office for details.

## CHEMICAL RESISTANCE

LEXAN EXELL D ST sheet has sufficient resistance to most chemical substances encountered in normal exterior use. In applications where the product will come into contact with aggressive chemicals, specific (application related) testing of the material is always advised. It is essential to check the compatibility before use.

## PRODUCT AVAILABILITY

| | |
|---|---|
| Product code: | LEXAN™EXELL™ D ST Sheet |
| Gauges: | 3,4,5,6 & 8 mm |
| Standard width: | 1250 & 2050 mm |
| Textures: | Polished one side, pebble texture on reverse |
| Colors: | CLEAR, BRONZE |
| | Other colors/sizes are available by special request. |

POLYVANTIS

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LEXAN™ POLYCARBONATE FILM & SHEET | Tough, Virtually Unbreakable

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