

PRODUCT DATASHEET

LEXAN™ 8A73 FILM

DESCRIPTION

LEXAN™ 8A73 Film is a one side matte, one side polished polycarbonate film with superior die-cutting properties. It offers improved light diffusion in addition to LEXAN film's inherent high temperature resistance and superior dimensional stability. This set of properties make LEXAN 8A73 Film ideally suited to automotive dial/cluster and other back-lit or dead-front applications.

TYPICAL PROPERTY VALUES*

| PROPERTY | ASTM TEST METHOD | UNITS (USCS) | VALUE | ISO TEST METHOD | UNITS (SI) | VALUE |
|----------|------------------|--------------|-------|-----------------|------------|-------|
|----------|------------------|--------------|-------|-----------------|------------|-------|

MECHANICAL

| | | | | | | |
|--|---------------|--------------|---------|------------|------|-------|
| Tensile Strength @ Yield | ASTM D882 | psi | 8500 | ISO 527 | MPa | 62 |
| Ultimate | ASTM D882 | psi | 9000 | ISO 527 | MPa | 65 |
| Tensile Modulus | ASTM D882 | psi | 300000 | ISO 527 | MPa | 2100 |
| Tensile Elongation at Break | ASTM D882 | % | 100-160 | ISO 527 | % | 100 |
| Gardner Impact Strength at 0.03" (0.75 mm) | ASTM D3029 | ft-lb | 23 | ISO 6603-1 | J | 31 |
| Tear Strength | | | | | | |
| Initiation | ASTM D1004 | lb/mil | 1.4-1.8 | | kN/m | 245 |
| Propagation | ASTM D1922 | g/mil | 30-55 | | kN/m | 10-20 |
| Puncture Resistance (Dynatup) | ASTM D3763 | ft-lb | 9 | | J | 12 |
| Fold Endurance (MIT) | | | | | | |
| 0.010" (0.25 mm) | ASTM D2176-69 | double folds | 20 | | | |
| 0.020" (0.50 mm) | ASTM D2176-69 | double folds | N/A | | | |

THERMAL

| | | | | | | |
|---|-----------------------|-------------------------------|------|-----------------|-------------------------|------|
| Coefficient of Thermal Conductivity | ASTM D5470 | Btu/hr/ft ² /°F/in | 1.35 | | W/m ² K | 0.2 |
| Coefficient of Thermal Expansion | ASTM E831 | (x10 ⁻⁵ /°F) | 3.2 | ISO 11359 | (x10 ⁻⁵ /°C) | 7 |
| Specific Heat @40°F (4°C) | ASTM E1269 | Btu/lb/°F | 0.3 | | KJ/Kg-°C | 1.25 |
| Glass Transition Temperature | ASTM D3417 / D3418 | °F | 307 | ISO 11357 | °C | 153 |
| Vicat Softening Temperature, B | ASTM 1525-00 modified | °F | 323 | | °C | 150 |
| Heat Deflection Temp. by TMA at 1.8 Mpa | | °F | 290 | ISO 75 Modified | °C | 135 |
| Brittleness Temperature | ASTM D746 | °F | -211 | | °C | -135 |

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|----------|-----------|--------|--------------|-------|-----------------|------------|-------|
|----------|-----------|--------|--------------|-------|-----------------|------------|-------|

PHYSICAL

| | | | | | | | |
|--|---------------|--|----------------------|-------|----------|-------------------|------|
| Density | ASTM D792 | | slug/ft ³ | 2.3 | ISO 1183 | kg/m ³ | 1240 |
| Water Absorption, 24 hrs. | ASTM D570 | | % change | 0.35 | ISO 62 | % change | 0.35 |
| Surface Energy (1 st / 2 nd surface) | ASTM D5946-01 | | - | 34/35 | | | |
| Surface Tension | Dyne Pens | | Dyne | >34 | | | |

OPTICAL

| | | | | | | | |
|------------------------------------|--------------|--|---|------|----------|---|----|
| Refractive Index @77°F (25°C) | ASTM D542A | | - | NA | | | |
| Light Transmission | ASTM D1003 | | % | 84 | | | |
| Yellowness Index | ASTM D1925 | | % | -2.7 | | | |
| Haze | ASTM D1003 | | % | 72 | | | |
| Gloss over Flat Black min/max @60° | ASTM D523-60 | | - | 29 | ISO 2813 | - | 29 |

*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.

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MANUFACTURING SPECIFICATIONS

| NOMINAL GAUGE RANGES | MIN./MAX LIMIT OF NOMINAL |
|-------------------------------|---------------------------|
| 0.010-0.020" (0.250-0.500 mm) | ± 10% |

POLYVANTIS

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LEXAN™ Tough, Virtually Unbreakable
POLYCARBONATE SHEET & FILM