

LEXAN™ SD8B24 FILM

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ SD8B24 film is a one side fine velvet (FV), one side matt (M) white opaque polycarbonate film that has specifically been designed to be used in government security documents, such as passport data pages, ID cards, driving licenses, etc. It offers great printability and ease of processing (laminating, die-cutting, embossing). LEXAN SD8B24 film is available in gauges ranging from 50 – 620 µm and in color WH9B246.

TYPICAL PROPERTY VALUES

| PROPERTY | ASTM TEST METHOD | UNITS (USCS) | VALUE | ISO TEST METHOD | UNITS (SI) | VALUE |
|--|------------------|---------------------------|----------------------|-----------------|---------------------------|-----------|
| MECHANICAL | | | | | | |
| Tensile Strength @ Yield | ASTM D882 | psi | 7542 | ISO 527 | MPa | 56 |
| Ultimate | ASTM D882 | psi | 7687 | ISO 527 | MPa | 56 |
| Tensile Modulus | ASTM D882 | psi | 355 x10 ³ | ISO 527 | MPa | 2450 |
| Tensile Elongation at Break | ASTM D882 | % | 50 | ISO 527 | % | 50 |
| Tear Strength | | | | | | |
| Initiation | ASTM D1004 | lbf | 12 | ASTM D1004 | N | 53 |
| Propagation | ASTM D1938 | lbf | 0.6 | ASTM D1938 | N | 2.5 |
| THERMAL | | | | | | |
| Coefficient of Thermal Expansion, flow | ASTM E831 | (x 10 ⁻⁵ / °F) | 3.9 | ISO 11359 | (x 10 ⁻⁵ / °C) | 7.1 |
| Glass Transition Temperature | ASTM D3418 | °F | 300 | ISO 11357 | °C | 149 |
| Vicat Softening Temperature, B50 | ASTM 1525 | °F | 297 | ISO 306 | °C | 147 |
| Heat Deflection Temp. Af 120°C/h | ASTM D648 | °F | 270 | ISO 75 Modified | °C | 132 |
| Shrinkage at 130°C, 30min | Internal method | % | 0.10 | Internal method | % | 0.10 |
| PHYSICAL | | | | | | |
| Density | ASTM D792 | slug/ft ³ | 2.6 | ISO 1183 | g/cm ³ | 1.34 |
| Water Absorption, 24 hrs. | ASTM D570 | % change | 0.12 | ISO 62 | % change | 0.12 |
| Surface Roughness Ra | | µin | 35 [M] | ISO4288 | µm | 0.9 [M] |
| | | | 87 [FV] | | | 2.2 [FV] |
| Surface Roughness R3z | | µin | 173 [M] | ISO4288 | µm | 4.4 [M] |
| | | | 465 [FV] | | | 11.8 [FV] |
| Surface Tension | Dyne solutions | Dyne/cm | 44 [M] | Dyne solutions | Dyne/cm | 44 [M] |
| | | | 39 [FV] | | | 39 [FV] |

| PROPERTY | ASTM TEST METHOD | UNITS (USCS) | VALUE | ISO TEST METHOD | UNITS (SI) | VALUE |
|--------------------|---------------------|--------------|---------|---------------------|------------|---------|
| OPTICAL | | | WH9B246 | | | WH9B246 |
| Light Transmission | ASTM D1003 | % | 2.14 | ASTM D1003 | % | 2.14 |
| Optical density | | | 1.67 | | | 1.67 |
| Color: | CIELab, Reflection, | | | CIELab, Reflection, | | |
| L-value | D65, 10° | | 94.79 | D65, 10° | | 94.79 |
| a-value | | | -0.09 | | | -0.09 |
| b-value | | | -2.31 | | | -2.31 |

- ◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC representative or the SABIC Quality Services Department. Reported Values are based on 0.250 mm (0.010") thickness film, except for the Coefficient of thermal expansion, Vicat softening temperature, Heat deflection temperature and water absorption, which are based on molded parts.

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MANUFACTURING SPECIFICATIONS

| NOMINAL GAUGE RANGES | MIN./MAX LIMIT OF NOMINAL |
|----------------------|---------------------------|
| 0.050 - < 0.250 mm | ± 5% |
| 0.250 - 0.620 mm | ± 2.5% |

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