

# LEXAN™ SD8B94L FILM

## PRODUCT DATASHEET

### DESCRIPTION

LEXAN™ SD8B94L Film is a one side fine velvet (FV), one side fine matt (FM) clear transparent laser markable polycarbonate film that is typically used in government security documents, such as passport data pages, ID cards, driving licenses, ... It offers excellent printability and ease of processing (laminating, die-cutting, hot stamping). LEXAN™ SD8B94L Film is available in gauges ranging from 50-150µm.

### TYPICAL PROPERTY VALUES

| PROPERTY                               | ASTM TEST METHOD              | UNITS (USCS)              | VALUE                | ISO TEST METHOD               | UNITS (SI)                | VALUE     |
|--|-------------------------------|---------------------------|----------------------|-------------------------------|---------------------------|-----------|
| <b>MECHANICAL</b>                      |                               |                           |                      |                               |                           |           |
| Tensile Strength @ Yield               | ASTM D882                     | psi                       | 8122                 | ISO 527                       | MPa                       | 56        |
| Ultimate                               | ASTM D882                     | psi                       | 8122                 | ISO 527                       | MPa                       | 56        |
| Tensile Modulus                        | ASTM D882                     | psi                       | 311 x10 <sup>3</sup> | ISO 527                       | MPa                       | 2150      |
| Tensile Elongation at Break            | ASTM D882                     | %                         | 85                   | ISO 527                       | %                         | 85        |
| Tear Strength                          |                               |                           |                      |                               |                           |           |
| Initiation                             | ASTM D1004                    | lbf                       | 12                   | ASTM D1004                    | N                         | 52        |
| Propagation                            | ASTM D1938                    | lbf                       | 0.6                  | ASTM D1938                    | N                         | 2.8       |
| <b>THERMAL</b>                         |                               |                           |                      |                               |                           |           |
| Coefficient of Thermal Expansion, flow | ASTM E831                     | (x 10 <sup>-5</sup> / °F) | 4.3                  | ISO 11359                     | (x 10 <sup>-5</sup> / °C) | 7.8       |
| Glass Transition Temperature           | ASTM D3418                    | °F                        | 298                  | ISO 11357                     | °C                        | 148       |
| Vicat Softening Temperature, B50       | ASTM 1525                     | °F                        | 297                  | ISO 306                       | °C                        | 147       |
| Heat Deflection Temp. Af 120°C/h       | ASTM D648                     | °F                        | 261                  | ISO 75 Modified               | °C                        | 127       |
| Shrinkage at 130°C, 30min              | Internal method               | %                         | 0.14                 | Internal method               | %                         | 0.14      |
| <b>PHYSICAL</b>                        |                               |                           |                      |                               |                           |           |
| Density                                | ASTM D792                     | slug/ft <sup>3</sup>      | 2.33                 | ISO 1183                      | g/cm <sup>3</sup>         | 1.20      |
| Water Absorption, 24 hrs.              | ASTM D570                     | % change                  | 0.17                 | ISO 62                        | % change                  | 0.17      |
| Surface Roughness Ra                   |                               | µin                       | 30 [FM]              | ISO4288                       | µm                        | 0.75 [FM] |
|  |                               |                           | 102 [FV]             |                               |                           | 2.6 [FV]  |
| Surface Roughness R3z                  |                               | µin                       | 150 [FM]             | ISO4288                       | µm                        | 3.8 [FM]  |
|  |                               |                           | 547 [FV]             |                               |                           | 13.9 [FV] |
| Surface Tension                        | Dyne solutions                | Dyne/cm                   | 40 [FM]              | Dyne solutions                | Dyne/cm                   | 40 [FM]   |
|  |                               |                           | 38 [FV]              |                               |                           | 38 [FV]   |
| <b>OPTICAL</b>                         |                               |                           |                      |                               |                           |           |
| Light Transmission                     | ASTM D1003                    | %                         | 87.8                 | ASTM D1003                    | %                         | 87.8      |
| Color: b-value                         | CIE Lab, Reflection, D65, 10° |                           | 2.43                 | CIE Lab, Reflection, D65, 10° |                           | 2.43      |

- ◆ 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

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| NOMINAL GAUGE RANGES | MIN./MAX LIMIT OF NOMINAL |
|----------------------|---------------------------|
| 0.050 - 0.150 mm     | ± 5%                      |

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