

LEXAN™ SD8A12 FILM

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ SD8A12 Film is a one side polished, high gloss (P), one side fine matt (FM) clear transparent polycarbonate film that has specifically been designed to be used in government security documents, such as passport data pages, ID cards, driving licenses, ... It offers great printability and ease of processing (laminating, die-cutting, hot stamping). LEXAN™ SD8A12 Film is available in gauges ranging from 50 - 100µm.

TYPICAL PROPERTY VALUES

| PROPERTY | ASTM TEST METHOD | UNITS (USCS) | VALUE | ISO TEST METHOD | UNITS (SI) | VALUE |
|--|------------------------------|---------------------------|----------------------|------------------------------|---------------------------|----------|
| MECHANICAL | | | | | | |
| 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 ³ | 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 |
| THERMAL | | | | | | |
| Coefficient of Thermal Expansion, flow | ASTM E831 | (x 10 ⁻⁵ / °F) | 4.2 | ISO 11359 | (x 10 ⁻⁵ / °C) | 7.5 |
| Glass Transition Temperature | ASTM D3418 | °F | 298 | ISO 11357 | °C | 148 |
| Vicat Softening Temperature, B50 | ASTM 1525 | °F | 295 | ISO 306 | °C | 146 |
| Heat Deflection Temp. Af 120°C/h | ASTM D648 | °F | 262 | ISO 75 Modified | °C | 128 |
| Shrinkage at 130°C, 30min | Internal method | % | 0.17 | Internal method | % | 0.17 |
| PHYSICAL | | | | | | |
| Density | ASTM D792 | slug/ft ³ | 2.33 | ISO 1183 | g/cm ³ | 1.20 |
| Water Absorption, 24 hrs. | ASTM D570 | % change | 0.09 | ISO 62 | % change | 0.09 |
| Surface Roughness Ra | | µin | 23 [FM] | ISO4288 | µm | 0.6 [FM] |
| | | | 7 [P] | | | 0.18 [P] |
| Surface Tension | Dyne solutions | Dyne/cm | 38 [FM] | Dyne solutions | Dyne/cm | 38 [FM] |
| | | | 40 [P] | | | 40 [P] |
| OPTICAL | | | | | | |
| Light Transmission | ASTM D1003 | % | 90 | ASTM D1003 | % | 90 |
| Color: b-value | CIELab, Reflection, D65, 10° | | -0.87 | CIELab, Reflection, D65, 10° | | -0.87 |

◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC, Specialty Film & Sheet representative or the Quality Services Department. Reported Values are based on 0.050 mm (0.002") 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 - 0.100 mm | ± 5% |

CONTACT US:

Middle East and Africa

SABIC Global Headquarters
PO Box 5101
Riyadh 11422
Saudi Arabia
T +966 (0) 1 225 8000
F +966 (0) 1 225 9000
E info@sabic.com

Email

sfs.info@sabic-ip.com

Americas

Specialty Film & Sheet
1 Plastics Avenue
Pittsfield, MA 01201
USA
Toll-free 1 800 323 3783
T 1 413 448 6655
F (888) 443 2033
E Spinside.sales@sabic-ip.com

Europe

Specialty Film & Sheet
Plasticslaan 1
4612 PX
Bergen op Zoom
The Netherlands
T +31 (0)164 293678
F +31 (0)164 293272
E sfs.info@sabic-ip.com

Asia Pacific

Specialty Film & Sheet
2550 Xiupu Road
Pudong
201319 Shanghai
China
T +86 21 2037 8188
F +86 21 2037 8288
E sfs.info@sabic-ip.com

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