POLYVANTIS

# PRODUCT DATASHEET

# LEXAN™ SD8A92 FILM

## DESCRIPTION

LEXAN™ SD8A92 Film is a one side polished, high gloss (P), one side fine matte (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 great printability and ease of processing (laminating, die-cutting, hot stamping). LEXAN SD8A92 Film is available in 50 and 100µm.

## TYPICAL PROPERTY VALUES♦

| PROPERTY | ASTM TEST METHOD | UNITS (USCS) | VALUE | ISO TEST METHOD | UNITS (SI) | VALUE |
|---|---|---|---|---|---|---|
| **MECHANICAL** | | | | | | |
| Tensile Strength @ Yield | ASTM D882 | psi | 7830 | ISO 527 | MPa | 54 |
| Ultimate | ASTM D882 | psi | 9700 | ISO 527 | MPa | 67 |
| Tensile Modulus | ASTM D882 | psi | 300 x$10^3$ | ISO 527 | MPa | 2080 |
| Tensile Elongation at Break | ASTM D882 | % | 137 | ISO 527 | % | 137 |
| Tear Strength | | | | | | |
| Initiation | ASTM D1004 | lbf | 12 | | N | 52 |
| Propagation | ASTM D1938 | lbf | 0.6 | | 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 | 147 |
| Heat Deflection Temp. Af 120°C/h | ASTM D648 | °F | 262 | ISO 75 Modified | °C | 127 |
| 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 | 44 [FM] | Dyne solutions | Dyne/cm | 44 [FM] |
| | | | 38 [P] | | | 38 [P] |

| PROPERTY | ASTM TEST METHOD | UNITS (USCS) | VALUE | ISO TEST METHOD | UNITS (SI) | VALUE |
|---|---|---|---|---|---|---|
| **OPTICAL** | | | | | | |
| Light Transmission | ASTM D1003 | % | 88 | | % | 88 |
| Color: b-value | CIELab, Reflection, | | -1.0 | CIELab, Reflection, | | -1.0 |
| | D65, 10° | | | D65, 10° | | |

♦ 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 Quality Services Department. Reported Values are based on 0.100 mm (0.004") gauge thickness unless otherwise noted. Coefficient of thermal expansion, Vicat softening temperature, Heat deflection temperature and water absorption, which are based on molded parts.

| NOMINAL GAUGE RANGES | MIN./MAX LIMIT OF NOMINAL |
|---|---|
| 0.050 – 0.100 mm | ± 5% |

POLYVANTIS

Polycarbonate products are sold globally under the trademark LEXAN™ Film & Sheet, owned by SABIC or its subsidiaries or affiliates.

www.polyvantis.com

LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

LEXAN is a trademark of SABIC

© POLYVANTIS PV_DS_001_SD8A92_FLM_ENG_04-26