

Lexan* DM35/DM35A Film

Product Datasheet

Description

Lexan DM35 and DM35A films are custom textured Lexan graphic grade films specifically designed for digital imaging applications. Both DM35 and DM35A films can be used as an over-lamination to help protect tradeshow graphics and provide rigidity for pop-up displays, or as a substrate for ink receptive coatings like Indigo and Ink-Jet. The DM product line is available in a wide range of custom widths out to 61.5" (1560 mm).

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 | 2506 |
| Tensile Elongation at Break | ASTM D882 | % | 100-160 | ISO 527 | % | 100-154 |
| 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 |
| Propogation | 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 | 60 | | | |
| 0.020" (0.50 mm) | ASTM D2176-69 | double folds | 20 | | | |
| 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) | 5.8 |
| 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 | °F | 312 | | °C | 156 |
| Heat Deflection Temp. by TMA at 1.8 Mpa | modified | | | | | |
| Shrinkage at 302°F (150°C) | ASTM D1204 | % | 1.40 | ISO 75 Modified | °C | 145 |
| Brittleness Temperature | ASTM D746 | °F | -211 | | % | 1.40 |
| | | | | | °C | -135 |
| Physical | | | | | | |
| Density | ASTM D792 | slug/ft ³ | 2.3 | ISO 1183 | kg/m ³ | 1200 |
| Water Absorption, 24 hrs. | ASTM D570 | % change | 0.35 | ISO 62 | % change | 0.35 |
| Surface Energy(1 st surface/ 2 nd surface) | ASTM D5946-01 | - | 36/36 | | | |
| Surface Tension(1 st surface/ 2 nd surface) | Dyne Pens | Dyne | 40-42/ 40-42 | | | |
| Optical | | | | | | |
| Refractive Index @77°F (25°C) | ASTM D542A | - | 1.6 | | | |
| Light Transmission | ASTM D1003 | % | 89 | | | |
| Yellowness Index | ASTM D1925 | % | 1.5 | | | |
| Haze | ASTM D1003 | % | 70 | | | |
| Gloss over Flat Black min/max @ 60° | ASTM D523-60 | - | See chart | ISO 2813 | - | See chart |

Manufacturing Specifications

| Nominal Gauge Ranges | Min./Max Limit of Nominal |
|--------------------------------|---------------------------|
| 0.005-0.007" (0.075-0.175 mm) | -/+10% |
| 0.008-0.014" (0.200- 0.350 mm) | -/+5% |
| 0.015" (0.375 mm) | -/+3% |

Textures

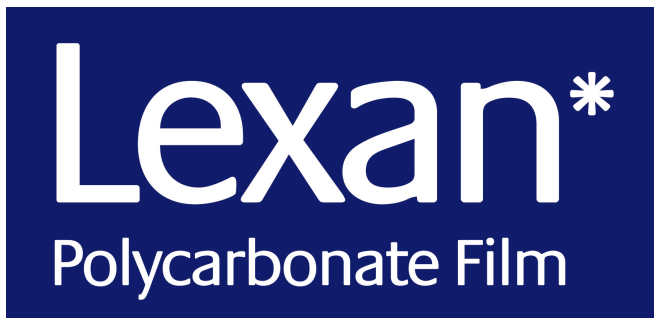
| | |
|-------------------------|-----------|
| Velvet/Ultra Fine Matte | DM35-112 |
| Velvet/Polished | DM35A-112 |

- These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC Innovative Plastics, Specialty Film & Sheet representative or the Quality Services Department. Reported values are based on 0.250 mm (0.010") thickness film unless otherwise noted.

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Gloss: (ASTMD 523-60)

| | Angle | | Velvet | Matte |
|--------------|-------|---------|--------|-------|
| DM35 | 60° | Minimum | 6 | 5 |
| | | Maximum | 10 | 15 |
| DM35A | 60° | Minimum | 8 | |
| | | Maximum | 14 | |



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