# SABIC Innovative Plastics Lexan® FR735A Polycarbonate Film, Flame Retardant

**Category :** Polymer , Film , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

**Material Notes:**

Lexan FR735A is a black, one side velvet, one polish flame-retardant polycarbonate film with a UL94 V-0 listing at 0.250 mm. This film has formability, excellent mechanical properties, good dimensional stability at high temperatures and a high flammability rating, making it good for applications such as power supply insulation, disc drive insulation, bus-bar insulation, TV/monitor insulation, PC board insulation, business equipment insulation and has insulation and EMI/RFI shielding when laminated with metal foil.Information provided by SABIC Innovative Plastics

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FR735A-Polycarbonate-Film-Flame-Retardant.php

| Physical Properties | Metric | English | Comments |
|---|---|---|---|
| Density | 1.34 g/cc | 0.0484 lb/in³ | ASTM D792 |
| Water Absorption | 0.28 % | 0.28 % | 24 hrs; ASTM D570 |
| Surface Tension | 36 - 38 dynes/cm | 36 - 38 dynes/cm | 1st surface; units: Dyne; Dyne Pens |
| | 36 - 38 dynes/cm | 36 - 38 dynes/cm | 2nd surface; units: Dyne; Dyne Pens |

| Mechanical Properties | Metric | English | Comments |
|---|---|---|---|
| Tensile Strength, Ultimate | 75.8 MPa | 11000 psi | ASTM D882 |
| Tensile Strength, Yield | 74.5 MPa | 10800 psi | ASTM D882 |
| Elongation at Break | 100 - 160 % | 100 - 160 % | ASTM D882 |
| Tensile Modulus | 2.19 GPa | 318 ksi | ASTM D882 |
| Gardner Impact | 14.9 J<br>@Thickness 0.762 mm | 11.0 ft-lb<br>@Thickness 0.0300 in | ASTM D3029 |
| Impact Test | 12.2 J | 9.00 ft-lb | Puncture Resistance, Dynatup; ASTM D3763 |
| Tear Strength | 7.27 kN/m | 41.5 pli | propogation; ASTM D1922 |
| | 251 kN/m | 1430 pli | initiation; ASTM D1004 |

| Thermal Properties | Metric | English | Comments |
|---|---|---|---|
| CTE, linear | 57.6 µm/m-°C | 32.0 µin/in-°F | ASTM E831 |
| Specific Heat Capacity | 1.26 J/g-°C | 0.301 BTU/lb-°F | ASTM E1269 |

| Thermal Properties | Metric | English | Comments |
|---|---|---|---|
| Thermal Conductivity | 0.200 W/m-K | 1.39 BTU-in/hr-ft²-°F | ASTM D5470 |
| Deflection Temperature at 1.8 MPa (264 psi) | 143.3 °C | 289.9 °F | TMA |
| Vicat Softening Point | 175 °C | 347 °F | ASTM 1525-00 modified |
| Brittleness Temperature | -135 °C | -211 °F | ASTM D746 |
| Glass Transition Temp, Tg | 153 °C | 307 °F | ASTM D3417/D3418 |
| Flammability, UL94 | V-0<br>@Thickness 0.250 - 0.375 mm | V-0<br>@Thickness 0.00984 - 0.0148 in | |
| | V-0<br>@Thickness >=0.375 mm | V-0<br>@Thickness >=0.0148 in | |
| Shrinkage | 0.020 %<br>@Temperature 150 °C | 0.020 %<br>@Temperature 302 °F | ASTM D1204 |

| Optical Properties | Metric | English | Comments |
|---|---|---|---|
| Gloss | 12 % | 12 % | over Flat Black min/max @ 60°; ASTM D523-60 |

| Electrical Properties | Metric | English | Comments |
|---|---|---|---|
| Volume Resistivity | 1.00e+17 ohm-cm | 1.00e+17 ohm-cm | ASTM D257 |
| Surface Resistivity per Square | 1.00e+16 ohm | 1.00e+16 ohm | ASTM D257 |
| Dielectric Constant | 2.8<br>@Frequency 1.00e+6 Hz | 2.8<br>@Frequency 1.00e+6 Hz | ASTM D150 |
| | 2.9<br>@Frequency 60.0 Hz | 2.9<br>@Frequency 60.0 Hz | ASTM D150 |
| Dielectric Strength | 68.0 kV/mm<br>@Temperature 23.0 °C | 1730 kV/in<br>@Temperature 73.4 °F | in oil, short time. 0.25mm; ASTM D149-97a Method A |
| Dissipation Factor | 0.0026<br>@Frequency 60.0 Hz | 0.0026<br>@Frequency 60.0 Hz | ASTM D150 |
| | 0.0117<br>@Frequency 1.00e+6 Hz | 0.0117<br>@Frequency 1.00e+6 Hz | ASTM D150 |
| Arc Resistance | 64 sec | 64 sec | Tungsten; ASTM D495 |

| Electrical Properties | Metric | English | Comments |
|---|---|---|---|
| Descriptive Properties | Value | Comments | |
| Fold Endurance (folds) | 12 | MIT; ASTM D2176-69; double, 0.50mm | |
| | 27 | MIT; ASTM D2176-69; double, 0.25mm | |
| Nominal Gauge Variation (%) | 5 | 0.250 - 0.500mm | |
| Surface Energy | 35 | 2nd surface; ASTM D5946-01 | |
| | 36 | 1st surface; ASTM D5946-01 | |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China