

# LEXAN™ MARGARD™ MRAC SHEET

## PRODUCT DATASHEET

### DESCRIPTION

LEXAN™ MARGARD™ MRAC flame-retardant sheet is a two-side, hard-coated polycarbonate material offering excellent impact resistance, optical clarity and the state-of-the-art in abrasion and UV resistance. LEXAN MARGARD MRAC sheet is specifically designed for aircraft window dust covers, acoustical panels, visors, diffusers, and any other similar application not requiring forming.

| PROPERTIES   | Unit      | Typical Value (◆)     | Test Method   |
|--|-----------|-----------------------|---------------|
| <b>PHYSICAL</b>  |           |                       |               |
| Specific Gravity (color dependent)                                   | -         | 1.2-1.27              | ASTM D729     |
| Water Absorption, Equilibrium, 24 hrs.                               | %         | .20                   | ASTM D570     |
| Sound Transmission (STC Ratings<br>36"x84")                          |           |                       | ASTM E9070    |
| @ .125"  |           | 25                    |               |
| @ .187"  |           | 29                    |               |
| Abrasion Resistance, CS10F wheels,<br>500 gram load, 100 cycles      | %         | 1-4                   | ASTM D1044-76 |
| <b>MECHANICAL</b>  |           |                       |               |
| Tensile Strength @ Yield   |           | 10,000                | ASTM D638     |
| Tensile Strength ultimate  |           | 9,500                 | ASTM D638     |
| Tensile Modulus  | psi       | 245,000               | ASTM D638     |
| Tensile Elongation, Ultimate   | %         | >80                   | ASTM D638     |
| Flexural Strength (Gauge Dependent)#                                 | psi       | 14,000                | ASTM D790     |
| Flexural Modulus (Gauge Dependent)#                                  | psi       | 350,000               | ASTM D790     |
| Dynatup Impact Strength, 1/2" dia. dart<br>(Gauge Dependent)# @ 73°F | ft-lbs    | 50                    | ASTM D3763    |
| Izod Impact Strength (Gauge Dependent)#                              | ft-lbs/in |                       | ASTM D256A    |
| Notched  |           | 2.4                   |               |
| Unnotched  |           | NB                    | ASTM D256A    |
| Gardner Impact Strength, round tip<br>(Gauge Dependent)# @ 73°F      | in-lbs    | >320                  | ASTM D3029    |
| <b>THERMAL</b>   |           |                       |               |
| Coefficient of Thermal Expansion                                     | in/in/°F  | $3.75 \times 10^{-5}$ | ASTM D696     |
| Heat Deflection Temperature @ 264 psi                                | °F        | 270                   | ASTM D648     |

| PROPERTIES                        | Unit | Typical Value (◆) | Test Method              |
|-----------------------------------|------|-------------------|--------------------------|
| FAA Flammability @ .060" to .500" | -    | Pass              | FAR 25.853F1A1/ BSS 7230 |

- ◆ These typical values are not intended for specification purposes. If minimum certifiable properties are required please contact your local SABIC representative.
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**Abrasion Resistance Comparison**

LEXAN™ MARGARD™ MRAC sheet exhibits significantly less hazing than uncoated polycarbonate sheet as shown in the abrasion resistance chart.

|                                     | Test Method          | % Haze                 |                  |       |
|-------------------------------------|----------------------|------------------------|------------------|-------|
|                                     |                      | Uncoated Polycarbonate | LEXAN MRAC Sheet | Glass |
| Taber Abrasion<br>100 Cycles CS 10F | ASTM D 1044<br>Z26.1 | 35.0                   | <3               | 0.5   |

‡ The Taber Abrader test measures the percent of change in haze that results from the grinding action of two abrasive impregnated wheels on the test samples. A constant load of 500 grams is maintained as the samples rotate on a turntable for a predetermined number of revolutions.

**Chemical Resistance**

LEXAN MARGARD MRAC sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels. Specific (application related) testing is always advised, especially in applications where the LEXAN MARGARD MRAC sheet will come into contact with aggressive chemicals.



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