

## Lexan\* Resin FL920

Americas: COMMERCIAL

Various weight reductions at .250" (6.35 mm) wall, 20% GR. Excellent flex mod, high tensile strength/heat resistance. V-0/5V at .250" (6.35mm).

### Property

| TYPICAL PROPERTIES <sup>(1)</sup>     |           |          |              |
|---------------------------------------|-----------|----------|--------------|
|                                       | Value     | Unit     | Standard     |
| <b>MECHANICAL</b>                     |           |          |              |
| FOAM - MECHANICAL 6.4 mm Wt Reduction | 10        | %        | -            |
| Tensile Stress, yield, 6.35 mm        | 58        | MPa      | ASTM D 638   |
| Tensile Strain, break, 6.35 mm        | 3.6       | %        | ASTM D 638   |
| Tensile Modulus, 6.4 mm               | 4270      | MPa      | ASTM D 638   |
| Flexural Stress, yield, 6.4 mm        | 106       | MPa      | ASTM D 790   |
| Flexural Modulus, 6.4 mm              | 5130      | MPa      | ASTM D 790   |
| <b>IMPACT</b>                         |           |          |              |
| FOAM - IMPACT 6.4 mm Wt Reduction     | 10        | %        | -            |
| Izod Impact, unnotched, 23°C          | 427       | J/m      | ASTM D 4812  |
| Falling Dart Impact, 23°C             | 43        | J        | SABIC Method |
| <b>THERMAL</b>                        |           |          |              |
| FOAM - THERMAL 6.4mm Wt Reduction     | 10        | %        | -            |
| HDT, 0.45 MPa, 6.4 mm, unannealed     | 143       | °C       | ASTM D 648   |
| HDT, 1.82 MPa, 6.4 mm, unannealed     | 136       | °C       | ASTM D 648   |
| CTE, -40°C to 95°C, flow              | 2.7E-05   | 1/°C     | ASTM E 831   |
| Specific Heat                         | 1.17      | J/g-°C   | ASTM C 351   |
| Relative Temp Index, Elec             | 110       | °C       | UL 746B      |
| Relative Temp Index, Mech w/impact    | 110       | °C       | UL 746B      |
| Relative Temp Index, Mech w/o impact  | 110       | °C       | UL 746B      |
| <b>PHYSICAL</b>                       |           |          |              |
| FOAM - PHYSICAL 6.4mm Wt Reduction    | 10        | %        | -            |
| Specific Gravity                      | 1.32      | -        | ASTM D 792   |
| Specific Gravity, foam molded         | 1.19      | -        | ASTM D 792   |
| Water Absorption, 24 hours            | 0.14      | %        | ASTM D 570   |
| Water Absorption, equilibrium, 23C    | 0.3       | %        | ASTM D 570   |
| Mold Shrinkage, flow, 6.4 mm          | 0.3 - 0.5 | %        | SABIC Method |
| <b>ELECTRICAL</b>                     |           |          |              |
| FOAM - ELECTRICAL 6.4 mm Wt Reduction | 20        | %        | -            |
| Volume Resistivity                    | 2.5E+17   | Ohm-cm   | ASTM D 257   |
| Surface Resistivity                   | >1.1E+17  | Ohm      | ASTM D 257   |
| Relative Permittivity, 100 Hz         | 2.52      | -        | ASTM D 150   |
| Relative Permittivity, 1 MHz          | 2.5       | -        | ASTM D 150   |
| Dissipation Factor, 100 Hz            | 0.0008    | -        | ASTM D 150   |
| Dissipation Factor, 1 MHz             | 0.0052    | -        | ASTM D 150   |
| Hot Wire Ignition {PLC}               | 1         | PLC Code | UL 746A      |
| High Voltage Arc Track Rate {PLC}     | 3         | PLC Code | UL 746A      |
| High Ampere Arc Ign, surface {PLC}    | 2         | PLC Code | UL 746A      |
| Comparative Tracking Index (UL) {PLC} | 3         | PLC Code | UL 746A      |

| FLAME CHARACTERISTICS                       | Value | Unit              | Standard |
|---|-------|-------------------|----------|
| FOAM - Flame Class Minimum Density          | 0.85  | g/cm <sup>3</sup> | -        |
| UL Recognized, 94V-0 Flame Class Rating (3) | 5.99  | mm                | UL 94    |
| UL Recognized, 94-5VA Rating (3)            | 5.99  | mm                | UL 94    |

Source GMD, last updated:08/07/1989

## Processing

| Parameter                                 | Value     | Unit |
|---|-----------|------|
| Structural Foam Molding                   |           |      |
| Blowing Agent, Physical System            | Nitrogen  | -    |
| Blowing Agent, Chemical System            | FLC95     | -    |
| Drying Time (Blowing Agent)               | 4         | hrs  |
| Drying Temperature (Blowing Agent)        | 105       | °C   |
| Concentration Range (Blowing Agent)       | 3 - 5     | %    |
| Recommended Concentration (Blowing Agent) | 1.5       | %    |
| Drying Temperature (Resin)                | 120       | °C   |
| Drying Time (Resin)                       | 3 - 4     | hrs  |
| Drying Time (Resin, Cumulative)           | 48        | hrs  |
| Melt Temperature                          | 290 - 315 | °C   |
| Nozzle Temperature                        | 270 - 295 | °C   |
| Front Temperature                         | 295 - 310 | °C   |
| Middle Temperature                        | 295 - 310 | °C   |
| Rear Temperature                          | 255 - 265 | °C   |
| Mold Temperature                          | 70 - 95   | °C   |

Source GMD, last updated:08/07/1989

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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