



**Product Data Sheet &  
General Processing Conditions**

**ESD 302 EM FR  
Polycarbonate (PC)  
Glass Fiber  
Flame Retardant  
ESD Protection  
Static Dissipative  
Easy Molding**



**PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS**

| <b>PERMANENCE</b>                            | <b>English</b>        | <b>SI Metric</b> | <b>ASTM<br/>TEST</b> |
|----------------------------------------------|-----------------------|------------------|----------------------|
| Primary Additive                             | 15 %                  | 15 %             |                      |
| Specific Gravity                             | 1.39                  | 1.39             | D 792                |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0020 - 0.0040 in/in | 0.20 - 0.40 %    | D 955                |

**MECHANICAL**

|                                   |                            |             |        |
|-----------------------------------|----------------------------|-------------|--------|
| Impact Strength, Izod             |                            |             |        |
| notched 1/8 in (3.2 mm) section   | 1.0 ft-lbs/in              | 53 J/m      | D 256  |
| unnotched 1/8 in (3.2 mm) section | 10.0 ft-lbs/in             | 534 J/m     | D 4812 |
| Tensile Strength                  | 11000 psi                  | 76 MPa      | D 638  |
| Tensile Elongation                | 3.0 - 5.0 %                | 3.0 - 5.0 % | D 638  |
| Tensile Modulus                   | 0.85 x 10 <sup>6</sup> psi | 5861 MPa    | D 638  |
| Flexural Strength                 | 18000 psi                  | 124 MPa     | D 790  |
| Flexural Modulus                  | 0.80 x 10 <sup>6</sup> psi | 5516 MPa    | D 790  |

**ELECTRICAL**

|                                     |               |               |                    |
|-------------------------------------|---------------|---------------|--------------------|
| Volume Resistivity                  | < 1E5 ohm.cm  | < 1E5 ohm.cm  | D 257              |
| Surface Resistivity                 | < 1E10 ohm/sq | < 1E10 ohm/sq | D 257              |
| Surface Resistance                  | < 1E9 ohm     | < 1E9 ohm     | ESD STM11.11       |
| Static Decay                        |               |               |                    |
| MIL-PRF-81705D, 5kV to 50 V, 12% RH | < 2.00 s      | < 2.00 s      | FTMS101C<br>4046.1 |

**THERMAL**

|                        |               |              |       |
|------------------------|---------------|--------------|-------|
| Deflection Temperature |               |              |       |
| @ 264 psi (1820 kPa)   | 275 °F        | 135 °C       | D 648 |
| Ignition Resistance*   |               |              |       |
| Flammability           | V-0 @ 1/16 in | V-0 @ 1.5 mm | UL94  |

**PROPERTY NOTES**

Data herein is typical and not to be construed as specifications.

Unless otherwise specified, all data listed is for natural or black colored materials. Pigments can affect properties.

\* This rating is not intended to reflect hazards of this or any other material under actual fire conditions.

**GENERAL PROCESSING FOR INJECTION MOLDING**

|                    | <b>English</b>    | <b>SI Metric</b> |
|--------------------|-------------------|------------------|
| Injection Pressure | 10000 - 15000 psi | 69 - 103 MPa     |
| Melt Temperature   | 550 - 600 °F      | 288 - 316 °C     |
| Mold Temperature   | 180 - 250 °F      | 82 - 121 °C      |
| Drying             | 4 hrs @ 250 °F    | 4 hrs @ 121 °C   |
| Moisture Content   | 0.02 %            | 0.02 %           |
| Dew Point          | -20 °F            | -29 °C           |