

## Bedford Plastics Glass Reinforced FR Polyester Flat Sheet, 3/8" to 1"

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Polyester, TS , Thermoset Polyester Glass SMC

### Material Notes:

Flame retardant grade; see details in the property table. Pultrusion results in the production and supply of one of the worlds strongest and most durable products available today. The pultruded products feature: High Strength Corrosion Resistant to many chemicals Light Weight - Weighs nearly 80% less than a steel profile of similar dimension Electrically Non-Conductive Non-Metallic Lower Life Cycle Cost Non-Leaching. Environmentally Friendly Dimensional Stability Information provided by Bedford Plastics.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Bedford-Plastics-Glass-Reinforced-FR-Polyester-Flat-Sheet-38-to-1.php](http://www.lookpolymers.com/polymer_Bedford-Plastics-Glass-Reinforced-FR-Polyester-Flat-Sheet-38-to-1.php)

| Physical Properties | Metric           | English                            | Comments          |
|---------------------|------------------|------------------------------------|-------------------|
| Density             | 1.72 - 1.94 g/cc | 0.0620 - 0.0700 lb/in <sup>3</sup> | ASTM D792         |
| Water Absorption    | <= 0.60 %        | <= 0.60 %                          | 24 hrs; ASTM D570 |

| Mechanical Properties      | Metric   | English   | Comments                                           |
|----------------------------|----------|-----------|----------------------------------------------------|
| Hardness, Barcol           | 40       | 40        | ASTM D2583                                         |
| Tensile Strength, Ultimate | 68.9 MPa | 10000 psi | Crosswise; ASTM D638                               |
|                            | 165 MPa  | 24000 psi | Lengthwise; ASTM D638                              |
| Tensile Modulus            | 9.65 GPa | 1400 ksi  | Crosswise; ASTM D638                               |
|                            | 13.8 GPa | 2000 ksi  | Lengthwise; ASTM D638                              |
| Flexural Strength          | 124 MPa  | 18000 psi | Crosswise; ASTM D790                               |
|                            | 207 MPa  | 30000 psi | Lengthwise; ASTM D790                              |
| Flexural Modulus           | 9.65 GPa | 1400 ksi  | Crosswise; ASTM D790                               |
|                            | 13.8 GPa | 2000 ksi  | Lengthwise; ASTM D790                              |
| Compressive Strength       | 114 MPa  | 16500 psi | Crosswise; ASTM D635                               |
|                            | 165 MPa  | 24000 psi | Lengthwise; ASTM D635                              |
| Compressive Modulus        | 6.89 GPa | 1000 ksi  | Crosswise; ASTM D635                               |
|                            | 12.4 GPa | 1800 ksi  | Lengthwise; ASTM D635                              |
| Ultimate Bearing Strength  | 221 MPa  | 32000 psi | Lengthwise; ASTM D953                              |
| Shear Strength             | 41.4 MPa | 6000 psi  | Perpendicular Shear Stress, Lengthwise; ASTM D3946 |
|                            | 41.4 MPa | 6000 psi  | Perpendicular Shear Stress,                        |

| Mechanical Properties | Metric    | English       | Crosswise: ASTM D3946<br>Comments |
|-----------------------|-----------|---------------|-----------------------------------|
| Izod Impact, Notched  | 2.67 J/cm | 5.00 ft-lb/in | Crosswise; ASTM D256              |
|                       | 10.7 J/cm | 20.0 ft-lb/in | Lengthwise; ASTM D256             |

| Thermal Properties | Metric                                                                                   | English                                                                                    | Comments              |
|--------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------|
| CTE, linear        | 8.00 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$<br>@Temperature 20.0 $^{\circ}\text{C}$ | 4.44 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$<br>@Temperature 68.0 $^{\circ}\text{F}$ | Lengthwise; ASTM D696 |
| Flammability, UL94 | V-0                                                                                      | V-0                                                                                        |                       |
| Flame Spread Index | $\leq 25$                                                                                | $\leq 25$                                                                                  | Tunnel Test; ASTM E84 |
| NBS Smoke Density  | 600 - 700                                                                                | 600 - 700                                                                                  | ASTM E662             |

| Electrical Properties | Metric     | English    | Comments                                     |
|-----------------------|------------|------------|----------------------------------------------|
| Dielectric Strength   | 1.38 kV/mm | 35.0 kV/in | Lengthwise; ASTM D149                        |
|                       | 7.87 kV/mm | 200 kV/in  | Perpendicular to Laminate Face;<br>ASTM D149 |
| Arc Resistance        | 120 sec    | 120 sec    | Lengthwise; ASTM D495                        |

| Descriptive Properties | Value      | Comments  |
|------------------------|------------|-----------|
| Flammability           | Nonburning | ASTM D635 |

## Contact Songhan Plastic Technology Co.,Ltd.

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