

T700G

STANDARD MODULUS CARBON FIBER

Enhanced tensile modulus with excellent processability in traditional manufacturing methods (weaving, braiding, filament winding, prepreg, etc). Manufacturing locations include Japan, U.S., and France.

PRODUCT DESIGNATION

| T700G | C | 12,000 | 3 | 1 | E |
|------------|--------|----------------|-------------|-------------------|---------------|
| Fiber Type | Twist* | Filament Count | Sizing Type | Surface Treatment | Sizing Amount |

* C: Never twisted

FIBER PROPERTIES

| PROPERTY | ENGLISH | METRIC | METHOD |
|-------------------|----------|------------------------|------------|
| Tensile Strength | 711 ksi | 4,900 MPa | TY-030B-01 |
| Tensile Modulus | 34.8 Msi | 240 GPa | TY-030B-01 |
| Strain at Failure | | 2.0% | TY-030B-01 |
| Density | | 1.80 g/cm ³ | TY-030B-02 |
| Filament Diameter | | 7 μm | |
| Yield | 12K | 800 g/1000m | TY-030B-03 |

FUNCTIONAL PROPERTIES

| PROPERTY | VALUE |
|------------------------------|-------------------------------|
| CTE | -0.3 α · 10 ⁻⁶ /°C |
| Specific Heat | 0.752 J/g · °C |
| Thermal Conductivity | 0.096 J/cm · s · °C |
| Electric Resistivity | 1.5 x 10 ⁻³ Ω · cm |
| Chemical Composition: Carbon | >95% |
| Na + K | <50 ppm |

RESIN SYSTEM COMPATIBILITY

| SIZING TYPE & AMOUNT | RESIN SYSTEM COMPATIBILITY | METHOD |
|----------------------|---|------------|
| 31E (0.5%) | Epoxy | TY-030B-05 |
| 41E (0.5%) | Epoxy | TY-030B-05 |
| 51C (1.0%) | Epoxy, phenolic, polyester, vinyl ester | TY-030B-05 |

COMPOSITE PROPERTIES

| PROPERTY | ENGLISH | METRIC | METHOD |
|-------------------------|---------|-----------|---------------|
| Tensile Strength* | 296 ksi | 2,040 MPa | ASTM D-3039 |
| Tensile Modulus* | 20 Msi | 141 GPa | ASTM D-3039 |
| Tensile Strain | | 1.40% | ASTM D-3039 |
| Compressive Strength* | 239 ksi | 1,645 MPa | SACMASRM1R-94 |
| Flexural Strength* | 286 ksi | 1,970 MPa | ASTM D-790 |
| Flexural Modulus* | 18 Msi | 125 GPa | ASTM D-790 |
| ILSS | 15 ksi | 102.1 MPa | SACMASRM1R-94 |
| In Plain Shear Strength | 19 ksi | 128 MPa | ASTM D-3518 |
| 90° Tensile Strength | 11 ksi | 75 MPa | ASTM D-3039 |

*Normalized to 60% fiber volume. Cured with #2500 epoxy at 130 °C.



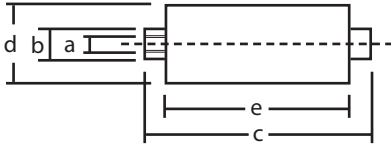
PACKAGING

The table below summarizes the tow sizes, twists, sizing types, and packaging available for standard material. Other bobbin sizes may be available on a limited basis.

| TOW SIZES | BOBBIN NET WEIGHT (kg) | BOBBIN TYPE | BOBBIN SIZE (mm) | | | | | SPOOL PER CASE | CASE NET WEIGHT (kg) |
|-----------|------------------------|-------------|------------------|------|-----|-----|-----|----------------|----------------------|
| | | | a | b | c | d | e | | |
| 12K | 6.0 | III | 76.5 | 82.5 | 280 | 200 | 252 | 4 | 24 |

Bobbin Type:

Type III



Please refer to SDS for handling and disposal.

For more information or purchasing inquiries:
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