

# Torayca™ TLP1040

## Nylon 6

### TECHNICAL DATA

#### Product Description

CF20%

#### Uses

- Sporting Goods

#### Processing Method

- Injection Molding

#### ISO Designation

- >PA6-CF20<

#### Type

- Long carbon fiber reinforced PA6

### ASTM & ISO Properties

| Physical                                         | Nominal Value | Unit                   | Test Method     |
|--------------------------------------------------|---------------|------------------------|-----------------|
| Density (23°C)                                   | 1.22          | g/cm <sup>3</sup>      | ISO 1183        |
| Molding Shrinkage <sup>1</sup>                   |               |                        | Internal Method |
| Across Flow : 3.00 mm                            | 0.30          | %                      |                 |
| Flow : 3.00 mm                                   | 0.10          | %                      |                 |
| Water Absorption <sup>2</sup> (Saturation, 23°C) | 2.8           | %                      | ISO 62          |
| Mechanical                                       | Nominal Value | Unit                   | Test Method     |
| Tensile Strength (23°C)                          | 265           | MPa                    | ISO 527-2       |
| Tensile Strain (Break, 23°C)                     | 2.0           | %                      | ISO 527-2       |
| Flexural Modulus (23°C)                          | 14500         | MPa                    | ISO 178         |
| Flexural Stress (23°C)                           | 360           | MPa                    | ISO 178         |
| Impact                                           | Nominal Value | Unit                   | Test Method     |
| Charpy Notched Impact Strength (23°C)            | 11.5          | kJ/m <sup>2</sup>      | ISO 179         |
| Thermal                                          | Nominal Value | Unit                   | Test Method     |
| Deflection Temperature Under Load                |               |                        | ISO 75-2/A      |
| 1.8 MPa, Unannealed                              | 220           | °C                     |                 |
| Melting Temperature                              | 225           | °C                     | DSC             |
| CLTE                                             |               |                        | ISO 11359-2     |
| Flow                                             | 3.0           | cm <sup>3</sup> /cm/°C |                 |
| Transverse                                       | 1.5           | cm <sup>3</sup> /cm/°C |                 |
| Electrical                                       | Nominal Value | Unit                   | Test Method     |
| Volume Resistivity                               | 0.010         | ohms·m                 | JIS K7194       |
| Surface Resistivity                              | 1.0           | ohms/cm <sup>2</sup>   | JIS K7194       |
| Flammability                                     | Nominal Value | Unit                   | Test Method     |
| Flame Rating <sup>3</sup> (Equivalent)           | HB            |                        | Internal Method |

#### Notes

<sup>1</sup> 80x80x3mm

<sup>2</sup> 50% RH

<sup>3</sup> UL94

