

# RTP 2181

Polyether Imide  
RTP Company

Message:  
Carbon Fiber

| General Information                                        |                                                        |                   |             |
|------------------------------------------------------------|--------------------------------------------------------|-------------------|-------------|
| Filler / Reinforcement                                     | Carbon fiber reinforced material, 10% filler by weight |                   |             |
| RoHS Compliance                                            | Contact manufacturer                                   |                   |             |
| Processing Method                                          | Injection molding                                      |                   |             |
| Physical                                                   | Nominal Value                                          | Unit              | Test Method |
| Specific Gravity                                           | 1.31                                                   | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.20 mm)                         | 0.20                                                   | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)                             | 0.20                                                   | %                 | ASTM D570   |
| Moisture Content                                           | 0.040                                                  | %                 |             |
| Primary Additive                                           | 10                                                     | %                 |             |
| Mechanical                                                 | Nominal Value                                          | Unit              | Test Method |
| Tensile Modulus                                            | 8620                                                   | MPa               | ASTM D638   |
| Tensile Strength                                           | 157                                                    | MPa               | ASTM D638   |
| Tensile Elongation (Yield)                                 | 3.0                                                    | %                 | ASTM D638   |
| Flexural Modulus                                           | 7580                                                   | MPa               | ASTM D790   |
| Flexural Strength                                          | 231                                                    | MPa               | ASTM D790   |
| Impact                                                     | Nominal Value                                          | Unit              | Test Method |
| Notched Izod Impact (3.20 mm)                              | 48                                                     | J/m               | ASTM D256   |
| Unnotched Izod Impact (3.20 mm)                            | 510                                                    | J/m               | ASTM D4812  |
| Thermal                                                    | Nominal Value                                          | Unit              | Test Method |
| Deflection Temperature Under Load                          |                                                        |                   | ASTM D648   |
| 0.45 MPa, not annealed                                     | 210                                                    | °C                | ASTM D648   |
| 1.8 MPa, not annealed                                      | 207                                                    | °C                | ASTM D648   |
| Electrical                                                 | Nominal Value                                          | Unit              | Test Method |
| Volume Resistivity                                         | < 1.0E+5                                               | ohms · cm         | ASTM D257   |
| Flammability                                               | Nominal Value                                          | Unit              | Test Method |
| Flame Rating (1.50 mm, ** Values per RTP Company testing.) | V-0                                                    |                   | UL 94       |
| Injection                                                  | Nominal Value                                          | Unit              |             |
| Drying Temperature                                         | 149                                                    | °C                |             |
| Drying Time                                                | 4.0                                                    | hr                |             |
| Dew Point                                                  | -28.9                                                  | °C                |             |
| Processing (Melt) Temp                                     | 354 - 399                                              | °C                |             |
| Mold Temperature                                           | 135 - 177                                              | °C                |             |

|                        |            |     |
|------------------------|------------|-----|
| Injection Pressure     | 82.7 - 124 | MPa |
| Injection instructions |            |     |

Desiccant Type Dryer Required.

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