# RTP ESD C 1780

Polyphenylene Ether + PS

RTP Company

## Message:

Warning: The status of this material is 'Commercial: Limited Issue'
The data for this material has not been recently verified.
Please contact RTP Company for current information prior to specifying this grade.
ESD C 1780 is modified polyphenylene oxide, PPO, with carbon fiber added for electrical conductivity and excellent static dissipation characteristics. This product is non-sloughing and colorable

| General Information | | | |
|---|---|---|---|
| Filler / Reinforcement | Carbon fiber reinforced material | | |
| Features | Conductivity<br>Electrostatic discharge protection<br>Antistatic property<br>Good coloring<br>No shedding | | |
| Agency Ratings | MIL B-81705C | | |
| RoHS Compliance | Contact manufacturer | | |
| Appearance | Black<br>Available colors<br>Natural color | | |
| Forms | Particle | | |
| Processing Method | Injection molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.16 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow (3.18 mm) | 0.10 | % | ASTM D955 |
| Water Absorption (23°C, 24 hr) | 0.060 | % | ASTM D570 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 8620 | MPa | ASTM D638 |
| Tensile Strength | 55.2 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 1.0 | % | ASTM D638 |
| Flexural Modulus | 6890 | MPa | ASTM D790 |
| Flexural Strength | 96.5 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact (3.18 mm) | 53 | J/m | ASTM D256 |
| Unnotched Izod Impact (3.18 mm) | 190 | J/m | ASTM D4812 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |

| | | | |
|---|---|---|---|
| 0.45 MPa, not annealed | 98.9 | °C | ASTM D648 |
| 1.8 MPa, not annealed | 93.3 | °C | ASTM D648 |

| Electrical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Surface Resistivity | 1.0E+7 | ohms | ASTM D257 |
| Volume Resistivity | 1.0E+4 | ohms·cm | ASTM D257 |

| Flammability | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Flame Rating (1.59 mm, RTP Tested) | HB | | UL 94 |

| Additional Information |
|---|
| Mold Shrinkage, Linear-Flow, ASTM D955, 0.25in.: 2mil/in.Tensile Elongation, ASTM D638: 1-2%Volume Resistivity, ASTM D257: <10E4 ohm-cmSurface Resistivity, ASTM D257: <10E7 ohm/sqStatic Decay, FTMS-4046.1, Mil B-81705C: pass |

| Injection | Nominal Value | Unit |
|---|---|---|
| Rear Temperature | 204 - 260 | °C |
| Middle Temperature | 204 - 260 | °C |
| Front Temperature | 204 - 260 | °C |
| Mold Temperature | 37.8 - 93.3 | °C |
| Injection Pressure | 68.9 - 138 | MPa |



## Recommended distributors for this material

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