

# RTP ESD C 4005A

Polyphthalamide

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.

| General Information                                                                                                                                                                                         |                                                       |                   |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------|-------------|
| Filler / Reinforcement                                                                                                                                                                                      | Glass fiber reinforced material, 30% filler by weight |                   |             |
| Features                                                                                                                                                                                                    | Electrostatic discharge protection                    |                   |             |
| Agency Ratings                                                                                                                                                                                              | MIL B-81705C                                          |                   |             |
| RoHS Compliance                                                                                                                                                                                             | Contact manufacturer                                  |                   |             |
| Appearance                                                                                                                                                                                                  | Black                                                 |                   |             |
|                                                                                                                                                                                                             | Available colors                                      |                   |             |
|                                                                                                                                                                                                             | Natural color                                         |                   |             |
| Forms                                                                                                                                                                                                       | Particle                                              |                   |             |
| Processing Method                                                                                                                                                                                           | Injection molding                                     |                   |             |
| Physical                                                                                                                                                                                                    | Nominal Value                                         | Unit              | Test Method |
| Specific Gravity                                                                                                                                                                                            | 1.54                                                  | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)                                                                                                                                                                          | 0.25 - 0.45                                           | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)                                                                                                                                                                              | 0.20                                                  | %                 | ASTM D570   |
| Mechanical                                                                                                                                                                                                  | Nominal Value                                         | Unit              | Test Method |
| Tensile Modulus                                                                                                                                                                                             | 12400                                                 | MPa               | ASTM D638   |
| Tensile Strength (Yield)                                                                                                                                                                                    | 69.0                                                  | MPa               | ASTM D638   |
| Tensile Elongation (Break)                                                                                                                                                                                  | 1.0                                                   | %                 | ASTM D638   |
| Flexural Modulus                                                                                                                                                                                            | 12400                                                 | MPa               | ASTM D790   |
| Flexural Strength (Yield)                                                                                                                                                                                   | 103                                                   | MPa               | ASTM D790   |
| Impact                                                                                                                                                                                                      | Nominal Value                                         | Unit              | Test Method |
| Notched Izod Impact (3.18 mm)                                                                                                                                                                               | 43                                                    | J/m               | ASTM D256   |
| Unnotched Izod Impact (3.18 mm)                                                                                                                                                                             | 160                                                   | J/m               | ASTM D4812  |
| Thermal                                                                                                                                                                                                     | Nominal Value                                         | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed)                                                                                                                                                     | 238                                                   | °C                | ASTM D648   |
| Electrical                                                                                                                                                                                                  | Nominal Value                                         | Unit              | Test Method |
| Surface Resistivity                                                                                                                                                                                         | 1.0E+6                                                | ohms              | ASTM D257   |
| Volume Resistivity                                                                                                                                                                                          | 1.0E+3                                                | ohms · cm         | ASTM D257   |
| Additional Information                                                                                                                                                                                      |                                                       |                   |             |
| Molding Shrinkage, Linear-Flow, ASTM D955, 3.175mm: 2.5-4.5mm/mStatic Decay, FTMS-4046.1, Mil B-81705C: <2.0 secondsVolume Resistivity, ASTM D257: <10E3 ohm-cmSurface Resistivity, ASTM D257: <10E6 ohm/sq |                                                       |                   |             |

| Injection          | Nominal Value | Unit |
|--------------------|---------------|------|
| Rear Temperature   | 304 - 343     | °C   |
| Middle Temperature | 304 - 343     | °C   |
| Front Temperature  | 304 - 343     | °C   |
| Mold Temperature   | 66.0 - 121    | °C   |
| Injection Pressure | 68.9 - 138    | MPa  |

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#### Recommended distributors for this material

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