

# RTP 400.5

General Purpose Polystyrene

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.  
-Preliminary Product Data per RTP Co.-

| General Information                |                                                        |                   |             |
|------------------------------------|--------------------------------------------------------|-------------------|-------------|
| Filler / Reinforcement             | Glass fiber reinforced material, 5.0% filler by weight |                   |             |
| RoHS Compliance                    | Contact manufacturer                                   |                   |             |
| Appearance                         | Black                                                  |                   |             |
|                                    | Natural color                                          |                   |             |
| Forms                              | Particle                                               |                   |             |
| Processing Method                  | Injection molding                                      |                   |             |
| Physical                           | Nominal Value                                          | Unit              | Test Method |
| Specific Gravity                   | 1.09                                                   | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm) | 0.20                                                   | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)     | 0.060                                                  | %                 | ASTM D570   |
| Hardness                           | Nominal Value                                          | Unit              | Test Method |
| Rockwell Hardness (R-Scale)        | 116                                                    |                   | ASTM D785   |
| Mechanical                         | Nominal Value                                          | Unit              | Test Method |
| Tensile Modulus                    | 4620                                                   | MPa               | ASTM D638   |
| Tensile Strength                   | 50.0                                                   | MPa               | ASTM D638   |
| Tensile Elongation (Break)         | 1.6                                                    | %                 | ASTM D638   |
| Flexural Modulus                   | 4830                                                   | MPa               | ASTM D790   |
| Flexural Strength                  | 82.7                                                   | MPa               | ASTM D790   |
| Compressive Strength               | 93.1                                                   | MPa               | ASTM D695   |
| Impact                             | Nominal Value                                          | Unit              | Test Method |
| Notched Izod Impact (3.18 mm)      | 27                                                     | J/m               | ASTM D256   |
| Unnotched Izod Impact (3.18 mm)    | 130                                                    | 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              | 82.2                                                   | °C                | ASTM D648   |
| CLTE - Flow                        | 5.9E-5                                                 | cm/cm/°C          | ASTM D696   |
| Thermal Conductivity               | 0.17                                                   | W/m/K             | ASTM C177   |
| Electrical                         | Nominal Value                                          | Unit              | Test Method |
| Volume Resistivity                 | 1.0E+16                                                | ohms · cm         | ASTM D257   |

|                                    |               |       |             |
|------------------------------------|---------------|-------|-------------|
| Dielectric Strength                | 18            | kV/mm | ASTM D149   |
| Dielectric Constant (1 MHz)        | 2.75          |       | ASTM D150   |
| Dissipation Factor (1 MHz)         | 7.0E-3        |       | ASTM D150   |
| Arc Resistance                     | 85.0          | sec   | ASTM D495   |
| Flammability                       | Nominal Value | Unit  | Test Method |
| Flame Rating (1.59 mm, RTP Tested) | HB            |       | UL 94       |

#### Additional Information

Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 3mil/in.

| Injection             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Drying Temperature    | 82.2          | °C   |
| Drying Time           | 2.0           | hr   |
| Suggested Max Regrind | 20            | %    |
| Rear Temperature      | 204 - 288     | °C   |
| Middle Temperature    | 204 - 288     | °C   |
| Front Temperature     | 204 - 288     | °C   |
| Mold Temperature      | 37.8 - 71.1   | °C   |
| Injection Pressure    | 68.9 - 103    | MPa  |
| Back Pressure         | 0.345         | MPa  |

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#### Recommended distributors for this material

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