# RTP 1400 AR 15

## Polyethersulfone

## **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.-

The value listed as UL 94, was tested in accordance with RTP Company Testing.

| General Information                             |                                    |       |             |  |
|---|------------------------------------|-------|-------------|--|
| Filler / Reinforcement                          | Aramid fiber, 15% filler by weight |       |             |  |
| Features  | Good wear resistance               |       |             |  |
|   | Good wear resistance               |       |             |  |
| RoHS Compliance                                 | Contact manufacturer               |       |             |  |
| Appearance                                      | Black                              |       |             |  |
|   | Natural color                      |       |             |  |
| Forms   | Particle                           |       |             |  |
| Processing Method                               | Injection molding                  |       |             |  |
| Physical  | Nominal Value                      | Unit  | Test Method |  |
| Specific Gravity                                | 1.38                               | g/cm³ | ASTM D792   |  |
| Molding Shrinkage - Flow (3.18 mm)              | 0.40                               | %     | ASTM D955   |  |
| Water Absorption (23°C, 24 hr)                  | 0.20                               | %     | ASTM D570   |  |
| Hardness  | Nominal Value                      | Unit  | Test Method |  |
| Rockwell Hardness (R-Scale)                     | 125                                |       | ASTM D785   |  |
| Mechanical                                      | Nominal Value                      | Unit  | Test Method |  |
| Tensile Modulus                                 | 4830                               | MPa   | ASTM D638   |  |
| Tensile Strength                                | 100                                | MPa   | ASTM D638   |  |
| Tensile Elongation (Break)                      | 4.0                                | %     | ASTM D638   |  |
| Flexural Modulus                                | 4140                               | MPa   | ASTM D790   |  |
| Flexural Strength                               | 145                                | MPa   | ASTM D790   |  |
| Coefficient of Friction (With<br>Metal-Dynamic) | 0.10                               |       | ASTM D1894  |  |
| Impact  | Nominal Value                      | Unit  | Test Method |  |
| Notched Izod Impact (3.18 mm)                   | 53                                 | J/m   | ASTM D256   |  |
| Unnotched Izod Impact (3.18 mm)                 | 370                                | J/m   | ASTM D4812  |  |
| Thermal   | Nominal Value                      | Unit  | Test Method |  |
| Deflection Temperature Under Load               |                                    |       | ASTM D648   |  |
| 0.45 MPa, not annealed                          | 213                                | °C    | ASTM D648   |  |
| 1.8 MPa, not annealed                           | 204                                | °C    | ASTM D648   |  |

| Linear thermal expansion coefficier | nt            |          | ASTM D696   |
|-------------------------------------|---------------|----------|-------------|
| Flow                                | 2.5E-5        | cm/cm/°C | ASTM D696   |
| Lateral                             | 3.1E-5        | cm/cm/°C | ASTM D696   |
| Thermal Conductivity                | 0.25          | W/m/K    | ASTM C177   |
| Electrical                          | Nominal Value | Unit     | Test Method |
| Volume Resistivity                  | 1.0E+16       | ohms·cm  | ASTM D257   |
| Flammability                        | Nominal Value | Unit     | Test Method |
| Flame Rating (1.59 mm)              | V-0           |          | UL 94       |
| Additional Information              |               |          |             |

Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 4mil/in.Wear Factor, K, ASTM D-3702: 100E-10in<sup>3</sup>/min/ft/lb/hrCoefficient of Friction, Dynamic, ASTM D-3702: 0.10The wear factor and coefficient of friction were both tested on a Falex Model No.6 Wear Testing Machine at 50 FPM, 2000 PV, against C1018 steel of hardness 15-25 Rockwell C, 14-17 micro smoothness.

| Injection              | Nominal Value | Unit   |
|------------------------|---------------|--------|
| Drying Temperature     | 149           | °C     |
| Drying Time            | 6.0           | hr     |
| Suggested Max Moisture | 0.040         | %      |
| Suggested Max Regrind  | 20            | %      |
| Rear Temperature       | 343 - 399     | °C     |
| Middle Temperature     | 343 - 399     | °C     |
| Front Temperature      | 343 - 399     | °C     |
| Mold Temperature       | 93.3 - 177    | °C     |
| Injection Pressure     | 68.9 - 124    | MPa    |
| Clamp Tonnage          | 6.9 - 11      | kN/cm² |

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#### Recommended distributors for this material

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