

# RTP 205H TFE 13 SI 2

Polyamide 66

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.  
RTP 205 TFE 13 SI 2 is a glass fiber, PTFE and silicon fluid modified high impact nylon 6/6.

| General Information                          |   |                   |             |
|--|---|-------------------|-------------|
| Filler / Reinforcement                       | Glass fiber reinforced material, 30% filler by weight |                   |             |
| Additive                                     | PTFE lubricant (13%)                                  |                   |             |
|  | Impact modifier                                       |                   |             |
|  | Silicone lubricant (2%)                               |                   |             |
| Features                                     | Impact modification                                   |                   |             |
|  | Lubrication   |                   |             |
| RoHS Compliance                              | Contact manufacturer                                  |                   |             |
| Appearance                                   | Black   |                   |             |
|  | Natural color   |                   |             |
| Forms  | Particle  |                   |             |
| Processing Method                            | Injection molding                                     |                   |             |
| Physical                                     | Nominal Value   | Unit              | Test Method |
| Specific Gravity                             | 1.45  | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)           | 0.20  | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)               | 0.60  | %                 | ASTM D570   |
| Hardness                                     | Nominal Value   | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                  | 114   |                   | ASTM D785   |
| Mechanical                                   | Nominal Value   | Unit              | Test Method |
| Tensile Modulus                              | 6890  | MPa               | ASTM D638   |
| Tensile Strength                             | 110   | MPa               | ASTM D638   |
| Tensile Elongation (Break)                   | 3.5   | %                 | ASTM D638   |
| Flexural Modulus                             | 6210  | MPa               | ASTM D790   |
| Flexural Strength                            | 172   | MPa               | ASTM D790   |
| Compressive Strength                         | 103   | MPa               | ASTM D695   |
| Coefficient of Friction (With Metal-Dynamic) | 0.25  |                   | ASTM D1894  |
| Impact                                       | Nominal Value   | Unit              | Test Method |
| Notched Izod Impact (6.35 mm)                | 190   | J/m               | ASTM D256   |

| Unnotched Izod Impact (6.35 mm)                         | 1000          | J/m     | ASTM D4812  |
|---|---------------|---------|-------------|
| Thermal   | Nominal Value | Unit    | Test Method |
| Deflection Temperature Under Load                       |               |         | ASTM D648   |
| 0.45 MPa, not annealed                                  | 221           | °C      | ASTM D648   |
| 1.8 MPa, not annealed                                   | 199           | °C      | ASTM D648   |
| Electrical  | Nominal Value | Unit    | Test Method |
| Volume Resistivity                                      | 1.0E+13       | ohms·cm | ASTM D257   |
| Dielectric Strength                                     | 20            | kV/mm   | ASTM D149   |
| Dielectric Constant (1 MHz)                             | 3.70          |         | ASTM D150   |
| Dissipation Factor (1 MHz)                              | 0.013         |         | ASTM D150   |
| Flammability  | Nominal Value | Unit    | Test Method |
| Flame Rating (1.59 mm, Values per RTP Company testing.) | HB            |         | UL 94       |

#### Additional Information

Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 4mil/in.Tensile Elongation, ASTM D-638: 3-4%Flammability, ASTM D-635: B in/min.Wear Factor, K, ASTM D-3702: 10E-10in<sup>3</sup>/min/ft/lb/hrCoefficient of Friction, Dynamic, ASTM D-3702: 0.25The wear factor and dynamic coefficient of friction were both tested on thrust washer apparatus at 300 FPM, 8500 PV, against 1141 Ryex steel of hardness 18-22 Rockwell C, 12-16 micro smoothness.

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 79.4          | °C   |
| Drying Time            | 4.0           | hr   |
| Suggested Max Moisture | 0.20          | %    |
| Suggested Max Regrind  | 20            | %    |
| Rear Temperature       | 282 - 296     | °C   |
| Middle Temperature     | 282 - 296     | °C   |
| Front Temperature      | 282 - 296     | °C   |
| Mold Temperature       | 65.6 - 107    | °C   |
| Injection Pressure     | 103 - 138     | MPa  |

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#### Recommended distributors for this material

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