# RTP 305 SI 2

Polycarbonate

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 | | |
| Additive | Silicone lubricant (2%) | | |
| Features | Lubrication | | |
| RoHS Compliance | Contact manufacturer | | |
| Appearance | Black<br>Natural color | | |
| Forms | Particle | | |
| Processing Method | Injection molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.43 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow (3.18 mm) | 0.10 | % | ASTM D955 |
| Water Absorption (23°C, 24 hr) | 0.080 | % | ASTM D570 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 119 | | ASTM D785 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 9310 | MPa | ASTM D638 |
| Tensile Strength | 124 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 2.0 | % | ASTM D638 |
| Flexural Modulus | 8620 | MPa | ASTM D790 |
| Flexural Strength | 186 | MPa | ASTM D790 |
| Compressive Strength | 124 | MPa | ASTM D695 |
| Coefficient of Friction | | | ASTM D1894 |
| With Metal-Dynamic | 0.22 | | ASTM D1894 |
| With metal-static | 0.19 | | ASTM D1894 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact (3.18 mm) | 130 | J/m | ASTM D256 |
| Unnotched Izod Impact (3.18 mm) | 800 | J/m | ASTM D4812 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, not annealed | 146 | °C | ASTM D648 |
| 1.8 MPa, not annealed | 143 | °C | ASTM D648 |

| | | | |
|---|---|---|---|
| CLTE - Flow | 2.3E-5 | cm/cm/°C | ASTM D696 |
| Thermal Conductivity | 0.32 | W/m/K | ASTM C177 |

| Flammability | Nominal Value | Test Method |
|---|---|---|
| Flame Rating (1.59 mm) | V-1 | UL 94 |

Additional Information

The value listed as Flammability, UL 94, was tested in accordance with RTP test standards.Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in: 2mil/in.Wear Factor, K, ASTM D-3702: 160E-10in$^3$/min/ft/lb/hrCoefficient of Friction, Static, ASTM D-3702: 0.19Coefficient of Friction, Dynamic, ASTM D-3702: 0.22The 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 | 121 | °C |
| Drying Time | 4.0 | hr |
| Suggested Max Moisture | 0.020 | % |
| Suggested Max Regrind | 20 | % |
| Rear Temperature | 288 - 343 | °C |
| Middle Temperature | 288 - 343 | °C |
| Front Temperature | 288 - 343 | °C |
| Mold Temperature | 65.6 - 121 | °C |
| Injection Pressure | 68.9 - 103 | MPa |



Recommended distributors for this material

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