

# RTP EMI 363

Polycarbonate  
RTP Company

Message:  
Stainless Steel Fiber - Electrically Conductive - EMI/RFI/ESD Protection

| General Information                |                                             |                   |                  |
|------------------------------------|---------------------------------------------|-------------------|------------------|
| Filler / Reinforcement             | Stainless steel fiber, 20% filler by weight |                   |                  |
| Features                           | Conductivity                                |                   |                  |
|                                    | Electromagnetic shielding (EMI)             |                   |                  |
|                                    | Electrostatic discharge protection          |                   |                  |
|                                    | Radio frequency shielding (RFI)             |                   |                  |
| RoHS Compliance                    | Contact manufacturer                        |                   |                  |
| Processing Method                  | Injection molding                           |                   |                  |
| Physical                           | Nominal Value                               | Unit              | Test Method      |
| Specific Gravity                   | 1.40                                        | g/cm <sup>3</sup> | ASTM D792        |
| Molding Shrinkage - Flow (3.20 mm) | 0.40 - 0.50                                 | %                 | ASTM D955        |
| Moisture Content                   | 0.020                                       | %                 |                  |
| Static Decay <sup>1</sup>          |                                             | sec               | FTMS 101C 4046.1 |
| Primary Additive                   | 20                                          | %                 |                  |
| Mechanical                         | Nominal Value                               | Unit              | Test Method      |
| Tensile Modulus                    | 3100                                        | MPa               | ASTM D638        |
| Tensile Strength                   | 68.9                                        | MPa               | ASTM D638        |
| Tensile Elongation (Yield)         | 3.0 - 6.0                                   | %                 | ASTM D638        |
| Flexural Modulus                   | 3100                                        | MPa               | ASTM D790        |
| Flexural Strength                  | 110                                         | MPa               | ASTM D790        |
| Impact                             | Nominal Value                               | Unit              | Test Method      |
| Notched Izod Impact (3.20 mm)      | 64                                          | J/m               | ASTM D256        |
| Unnotched Izod Impact (3.20 mm)    | 1100                                        | J/m               | ASTM D4812       |
| Electrical                         | Nominal Value                               | Unit              | Test Method      |
| Surface Resistivity                |                                             |                   |                  |
| --                                 | < 1.0E+4                                    | ohms              | ASTM D257        |
| --                                 | < 1.0E+3                                    | ohms              | ESD STM11.11     |
| Volume Resistivity                 | < 1.0                                       | ohms · cm         | ASTM D257        |
| Injection                          | Nominal Value                               | Unit              |                  |
| Drying Temperature                 | 121                                         | °C                |                  |
| Drying Time                        | 4.0                                         | hr                |                  |
| Dew Point                          | -28.9                                       | °C                |                  |
| Processing (Melt) Temp             | 277 - 304                                   | °C                |                  |

|                                                                                                                                                                                                                                                  |            |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|
| Mold Temperature                                                                                                                                                                                                                                 | 71.1 - 121 | °C  |
| Injection Pressure                                                                                                                                                                                                                               | 68.9 - 103 | MPa |
| Injection instructions                                                                                                                                                                                                                           |            |     |
| Use a reverse barrel profile. Remove hopper magnets. Allow 4 - 5 shots to properly disperse the conductive fibers. The surface finish should have a silver streaking appearance, not clumps.Remove hopper magnets.Desiccant Type Dryer Required. |            |     |
| NOTE                                                                                                                                                                                                                                             |            |     |

1. MIL-PRF-81705D, 5kV to 50 V, 12% RH

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