

# RTP 4087

Polyphthalamide

RTP Company

Message:

Carbon Fiber

| General Information                                        |                                                        |                   |             |
|------------------------------------------------------------|--------------------------------------------------------|-------------------|-------------|
| Filler / Reinforcement                                     | Carbon fiber reinforced material, 40% filler by weight |                   |             |
| RoHS Compliance                                            | Contact manufacturer                                   |                   |             |
| Processing Method                                          | Injection molding                                      |                   |             |
| Physical                                                   | Nominal Value                                          | Unit              | Test Method |
| Specific Gravity                                           | 1.38                                                   | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.20 mm)                         | 0.050 - 0.10                                           | %                 | ASTM D955   |
| Moisture Content                                           | 0.050                                                  | %                 |             |
| Primary Additive                                           | 40                                                     | %                 |             |
| Mechanical                                                 | Nominal Value                                          | Unit              | Test Method |
| Tensile Modulus                                            | 31700                                                  | MPa               | ASTM D638   |
| Tensile Strength                                           | 296                                                    | MPa               | ASTM D638   |
| Tensile Elongation (Yield)                                 | 1.0 - 2.0                                              | %                 | ASTM D638   |
| Flexural Modulus                                           | 27600                                                  | MPa               | ASTM D790   |
| Flexural Strength                                          | 427                                                    | MPa               | ASTM D790   |
| Impact                                                     | Nominal Value                                          | Unit              | Test Method |
| Notched Izod Impact (3.20 mm)                              | 80                                                     | J/m               | ASTM D256   |
| Unnotched Izod Impact (3.20 mm)                            | 850                                                    | J/m               | ASTM D4812  |
| Thermal                                                    | Nominal Value                                          | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed)    | 277                                                    | °C                | ASTM D648   |
| Electrical                                                 | Nominal Value                                          | Unit              | Test Method |
| Volume Resistivity                                         | < 1.0E+4                                               | ohms · cm         | ASTM D257   |
| Flammability                                               | Nominal Value                                          | Unit              | Test Method |
| Flame Rating (1.50 mm, ** Values per RTP Company testing.) | HB                                                     |                   | UL 94       |
| Injection                                                  | Nominal Value                                          | Unit              |             |
| Drying Temperature                                         | 107                                                    | °C                |             |
| Drying Time                                                | 4.0 - 6.0                                              | hr                |             |
| Dew Point                                                  | -31.7                                                  | °C                |             |
| Processing (Melt) Temp                                     | 302 - 329                                              | °C                |             |
| Mold Temperature                                           | 135 - 163                                              | °C                |             |
| Injection Pressure                                         | 68.9 - 124                                             | MPa               |             |
| Injection instructions                                     |                                                        |                   |             |

Desiccant Type Dryer Required.

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