

# RAMSTER PF321G6

Polybutylene Terephthalate + PET  
Polyram Ram-On Industries

Message:  
30% GLASS FIBER REINFORCED, FALME RETARDANT PBT/PET FOR INJECTION MOULDING APPLICATION.

| General Information                       |                                                       |                   |                         |
|-------------------------------------------|-------------------------------------------------------|-------------------|-------------------------|
| UL YellowCard                             | E174094-100771305                                     | E174094-100771306 |                         |
| Filler / Reinforcement                    | Glass fiber reinforced material, 30% filler by weight |                   |                         |
| Additive                                  | Flame retardancy                                      |                   |                         |
| Features                                  | Flame retardancy                                      |                   |                         |
| RoHS Compliance                           | RoHS compliance                                       |                   |                         |
| Processing Method                         | Injection molding                                     |                   |                         |
| Physical                                  | Nominal Value                                         | Unit              | Test Method             |
| Specific Gravity                          | 1.68                                                  | g/cm <sup>3</sup> | ASTM D792, ISO 1183     |
| Melt Mass-Flow Rate (MFR) (250°C/2.16 kg) | 10                                                    | g/10 min          | ASTM D1238, ISO 1133    |
| Molding Shrinkage                         |                                                       |                   |                         |
| Flow                                      | 0.20                                                  | %                 | ASTM D955               |
| --                                        | 0.20                                                  | %                 | ISO 2577                |
| Water Absorption                          |                                                       |                   |                         |
| Saturation                                | 0.50                                                  | %                 | ASTM D570               |
| Saturated, 23°C                           | 0.50                                                  | %                 | ISO 62                  |
| Equilibrium, 23°C, 50% RH                 | 0.10                                                  | %                 | ASTM D570, ISO 62       |
| Mechanical                                | Nominal Value                                         | Unit              | Test Method             |
| Tensile Modulus                           | 9400                                                  | MPa               | ASTM D638, ISO 527-2    |
| Tensile Strength (Yield)                  | 140                                                   | MPa               | ASTM D638, ISO 527-2    |
| Tensile Elongation (Break)                | 3.0                                                   | %                 | ASTM D638, ISO 527-2    |
| Flexural Modulus                          | 8000                                                  | MPa               | ASTM D790, ISO 178      |
| Flexural Strength                         | 170                                                   | MPa               | ASTM D790, ISO 178      |
| Impact                                    | Nominal Value                                         | Unit              | Test Method             |
| Notched Izod Impact                       |                                                       |                   |                         |
| 23°C                                      | 100                                                   | J/m               | ASTM D256               |
| 23°C                                      | 9.0                                                   | kJ/m²             | ISO 180                 |
| Thermal                                   | Nominal Value                                         | Unit              | Test Method             |
| Deflection Temperature Under Load         |                                                       |                   |                         |
| 0.45 MPa, not annealed                    | 220                                                   | °C                | ASTM D648, ISO 75-2/B   |
| 1.8 MPa, not annealed                     | 210                                                   | °C                | ASTM D648, ISO 75-2/A   |
| Melting Temperature                       | 225                                                   | °C                | ISO 11357-3, ASTM D3417 |
| Electrical                                | Nominal Value                                         | Unit              | Test Method             |

|                              |               |      |                |
|------------------------------|---------------|------|----------------|
| Dielectric Constant (1 MHz)  | 3.60          |      | IEC 60250      |
| Comparative Tracking Index   | 175           | V    | IEC 60112      |
| Flammability                 | Nominal Value | Unit | Test Method    |
| Flame Rating                 |               |      | UL 94          |
|                              | V-0           |      |                |
| 1.60 mm                      | 5VA           |      | UL 94          |
|                              | V-0           |      |                |
| 3.00 mm                      | 5VA           |      | UL 94          |
| Glow Wire Flammability Index | 960           | °C   | IEC 60695-2-12 |
| Injection                    | Nominal Value | Unit |                |
| Drying Temperature           | 120           | °C   |                |
| Drying Time                  | 3.0 - 4.0     | hr   |                |
| Suggested Max Moisture       | 0.050         | %    |                |
| Rear Temperature             | 235 - 255     | °C   |                |
| Middle Temperature           | 240 - 260     | °C   |                |
| Front Temperature            | 245 - 270     | °C   |                |
| Processing (Melt) Temp       | 240 - 270     | °C   |                |
| Mold Temperature             | 70.0 - 90.0   | °C   |                |
| Injection Pressure           | 70.0 - 105    | MPa  |                |
| Holding Pressure             | 30.0 - 105    | MPa  |                |
| Back Pressure                | 0.350 - 0.700 | MPa  |                |
| Screw Speed                  | 60 - 90       | rpm  |                |
| Injection instructions       |               |      |                |

Fill Speed: 25 to 50 mm/sec

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