

# PLUSTEK PB150

Polyamide 6

Polyram Ram-On Industries

## Message:

General purpose Fast Cycle Polyamide 6 for Injection Moulding applications.

| General Information               |                    |                   |                       |
|-----------------------------------|--------------------|-------------------|-----------------------|
| Features                          | Fast molding cycle |                   |                       |
|                                   | General            |                   |                       |
| Uses                              | General            |                   |                       |
| RoHS Compliance                   | RoHS compliance    |                   |                       |
| Processing Method                 | Injection molding  |                   |                       |
| Physical                          | Nominal Value      | Unit              | Test Method           |
| Specific Gravity                  | 1.14               | g/cm <sup>3</sup> | ASTM D792, ISO 1183   |
| Molding Shrinkage                 |                    |                   |                       |
| Flow                              | 1.3 - 1.7          | %                 | ASTM D955             |
| --                                | 1.3 - 1.7          | %                 | ISO 2577              |
| Water Absorption                  |                    |                   |                       |
| Saturation                        | 9.5                | %                 | ASTM D570             |
| Saturated, 23°C                   | 9.5                | %                 | ISO 62                |
| Equilibrium, 23°C, 50% RH         | 3.0                | %                 | ASTM D570, ISO 62     |
| Hardness                          | Nominal Value      | Unit              | Test Method           |
| Rockwell Hardness                 |                    |                   |                       |
| Class r                           | 120                |                   | ASTM D785             |
| R scale                           | 120                |                   | ISO 2039-2            |
| Mechanical                        | Nominal Value      | Unit              | Test Method           |
| Tensile Strength (Yield)          | 90.0               | MPa               | ASTM D638, ISO 527-2  |
| Tensile Elongation (Break)        | > 10               | %                 | ASTM D638, ISO 527-2  |
| Flexural Modulus                  | 2500               | MPa               | ASTM D790, ISO 178    |
| Flexural Strength                 | 100                | MPa               | ASTM D790, ISO 178    |
| Impact                            | Nominal Value      | Unit              | Test Method           |
| Notched Izod Impact               |                    |                   |                       |
| 23°C                              | 50                 | J/m               | ASTM D256             |
| 23°C                              | 5.0                | kJ/m <sup>2</sup> | ISO 180               |
| Thermal                           | Nominal Value      | Unit              | Test Method           |
| Deflection Temperature Under Load |                    |                   |                       |
| 0.45 MPa, not annealed            | 185                | °C                | ASTM D648, ISO 75-2/B |
| 1.8 MPa, not annealed             | 80.0               | °C                | ASTM D648, ISO 75-2/A |

| Maximum operating temperature-Short Peaks Operation | 180           | °C      |                         |
|-----------------------------------------------------|---------------|---------|-------------------------|
| Maximum Continuous Use Temperature                  | 80            | °C      |                         |
| Melting Temperature                                 | 218           | °C      | ISO 11357-3, ASTM D3418 |
| Electrical                                          | Nominal Value | Unit    | Test Method             |
| Surface Resistivity                                 | 1.0E+13       | ohms    | IEC 60093               |
| Volume Resistivity                                  | 1.0E+17       | ohms·cm | IEC 60093               |
| Dielectric Strength                                 | 100           | kV/mm   | IEC 60243-1             |
| Dielectric Constant (1 MHz)                         | 3.50          |         | IEC 60250               |
| Flammability                                        | Nominal Value | Unit    | Test Method             |
| Flame Rating                                        | HB            |         | UL 94                   |
| Glow Wire Flammability Index                        | 850           | °C      | IEC 60695-2-12          |
| Injection                                           | Nominal Value | Unit    |                         |
| Drying Temperature                                  | 85.0          | °C      |                         |
| Drying Time                                         | 3.0           | hr      |                         |
| Suggested Max Moisture                              | 0.15          | %       |                         |
| Rear Temperature                                    | 220 - 260     | °C      |                         |
| Middle Temperature                                  | 230 - 265     | °C      |                         |
| Front Temperature                                   | 250 - 270     | °C      |                         |
| Mold Temperature                                    | 55.0 - 95.0   | °C      |                         |
| Injection Pressure                                  | 70.0 - 105    | MPa     |                         |
| Injection Rate                                      | Fast          |         |                         |
| Holding Pressure                                    | 30.0 - 70.0   | MPa     |                         |
| Back Pressure                                       | 0.350 - 0.700 | MPa     |                         |
| Screw Speed                                         | 60 - 90       | rpm     |                         |
| Injection instructions                              |               |         |                         |

Fill Speed: 50 to 75 mm/sec

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