

# PLUSTEK PB702

Polyamide 6

Polyram Ram-On Industries

## Message:

Polyamide 6 UV Stabilized for Fast Cycle Injection Moulding applications.

| General Information                   |                    |                   |                       |
|---------------------------------------|--------------------|-------------------|-----------------------|
| Additive                              | UV stabilizer      |                   |                       |
| Features                              | Good UV resistance |                   |                       |
|                                       | Fast molding cycle |                   |                       |
| 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                                  | 1.2 - 1.6          | %                 | ASTM D955             |
| --                                    | 1.2 - 1.6          | %                 | 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 Modulus                       | 2700               | MPa               | ASTM D638, ISO 527-2  |
| Tensile Strength (Yield)              | 90.0               | MPa               | ASTM D638, ISO 527-2  |
| Tensile Elongation (Break)            | > 10               | %                 | ASTM D638, ISO 527-2  |
| Flexural Modulus                      | 2900               | MPa               | ASTM D790, ISO 178    |
| Flexural Strength                     | 110                | MPa               | ASTM D790, ISO 178    |
| Impact                                | Nominal Value      | Unit              | Test Method           |
| Notched Izod Impact                   |                    |                   |                       |
| 23°C                                  | 60                 | J/m               | ASTM D256             |
| 23°C                                  | 6.0                | kJ/m <sup>2</sup> | ISO 180               |
| Unnotched Izod Impact Strength (23°C) | No Break           |                   | 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 (3.00 mm)                              | V-2           |         | UL 94                   |
| 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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