

# PLUSTEK PA604

Polyamide 66  
Polyram Ram-On Industries

Message:  
HIGH HEAT STABILIZED POLYAMIDE 6.6 FOR INJECTION MOULDING APPLICATIONS.

| General Information                                 |                   |                   |                         |
|-----------------------------------------------------|-------------------|-------------------|-------------------------|
| Additive                                            | heat stabilizer   |                   |                         |
| Features                                            | Thermal Stability |                   |                         |
| 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                                                | 1.1 - 1.8         | %                 |                         |
| --                                                  | 1.1 - 1.8         | %                 | ISO 2577                |
| Water Absorption                                    |                   |                   |                         |
| Saturation                                          | 8.5               | %                 | ASTM D570               |
| Saturated, 23°C                                     | 8.5               | %                 | ISO 62                  |
| Equilibrium, 23°C, 50% RH                           | 2.8               | %                 | ASTM D570, ISO 62       |
| Hardness                                            | Nominal Value     | Unit              | Test Method             |
| Rockwell Hardness                                   |                   |                   |                         |
| Class r                                             | 118               |                   | ASTM D785               |
| R scale                                             | 118               |                   | ISO 2039-2              |
| Mechanical                                          | Nominal Value     | Unit              | Test Method             |
| Tensile Strength (Yield)                            | 85.0              | 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                                   | 115               | 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                              | 205               | °C                | ASTM D648, ISO 75-2/B   |
| 1.8 MPa, not annealed                               | 90.0              | °C                | ASTM D648, ISO 75-2/A   |
| Maximum operating temperature-Short Peaks Operation | 180               | °C                |                         |
| Maximum Continuous Use Temperature                  | 120               | °C                |                         |
| Melting Temperature                                 | 256               | °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         | 120           | kV/mm   | IEC 60243-1 |
| Dielectric Constant (1 MHz) | 3.30          |         | IEC 60250   |
| Flammability                | Nominal Value | Unit    | Test Method |
| Flame Rating                |               |         | UL 94       |
| 1.60 mm                     | V-2           |         | UL 94       |
| 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            | 270 - 280     | °C      |             |
| Middle Temperature          | 280 - 300     | °C      |             |
| Front Temperature           | 285 - 310     | °C      |             |
| Mold Temperature            | 65.0 - 110    | °C      |             |
| Injection Pressure          | 70.0 - 125    | MPa     |             |
| Injection Rate              | Fast          |         |             |
| Holding Pressure            | 35.0 - 85.0   | 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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