

# Kingfa PA6-MG45

Polyamide 6  
Kingfa

## Technical Data

|                                         |                                                                   |             |
|-----------------------------------------|-------------------------------------------------------------------|-------------|
| General                                 |                                                                   |             |
| Material Status                         | • Commercial: Active                                              |             |
| UL Yellow Card <sup>1</sup>             | • E171666-100708554                                               |             |
| Search for UL Yellow Card               | • Kingfa                                                          |             |
| Availability                            | • Asia Pacific • North America                                    |             |
| Filler / Reinforcement                  | • Glass\Mineral, 45% Filler by Weight                             |             |
| Features                                | • Good Abrasion Resistance • Good Surface Finish • Warp Resistant |             |
| Uses                                    | • Automotive Applications                                         |             |
| Forms                                   | • Pellets                                                         |             |
| Processing Method                       | • Injection Molding                                               |             |
| Physical                                | Nominal Value Unit                                                | Test Method |
| Specific Gravity                        | 1.48 g/cm³                                                        | ASTM D792   |
| Molding Shrinkage - Flow (23°C)         | 0.20 to 0.30 %                                                    | ASTM D955   |
| Water Absorption (23°C, 24 hr)          | 0.60 %                                                            | ASTM D570   |
| Mechanical                              | Nominal Value Unit                                                | Test Method |
| Tensile Strength <sup>3</sup>           | 130 MPa                                                           | ASTM D638   |
| Tensile Elongation <sup>3</sup> (Break) | 2.0 %                                                             | ASTM D638   |
| Flexural Modulus <sup>4</sup>           | 9100 MPa                                                          | ASTM D790   |
| Flexural Strength <sup>4</sup>          | 207 MPa                                                           | ASTM D790   |
| Impact                                  | Nominal Value Unit                                                | Test Method |
| Notched Izod Impact (23°C, 3.20 mm)     | 190 J/m                                                           | ASTM D256   |
| Hardness                                | Nominal Value Unit                                                | Test Method |
| Rockwell Hardness (R-Scale)             | 121                                                               | ASTM D785   |
| Thermal                                 | Nominal Value Unit                                                | Test Method |
| Deflection Temperature Under Load       |                                                                   | ASTM D648   |
| 0.45 MPa, Unannealed, 6.40 mm           | 219 °C                                                            |             |
| 1.8 MPa, Unannealed, 6.40 mm            | 212 °C                                                            |             |
| Electrical                              | Nominal Value Unit                                                | Test Method |
| Volume Resistivity                      | 1.0E+15 ohm·cm                                                    | ASTM D257   |
| Flammability                            | Nominal Value Unit                                                | Test Method |
| Flame Rating                            |                                                                   | UL 94       |
| 1.50 mm                                 | HB                                                                |             |
| 3.00 mm                                 | HB                                                                |             |
| Injection                               | Nominal Value Unit                                                |             |
| Drying Temperature                      | 90.0 to 110 °C                                                    |             |
| Drying Time                             | 4.0 to 6.0 hr                                                     |             |
| Rear Temperature                        | 225 to 245 °C                                                     |             |
| Middle Temperature                      | 250 to 270 °C                                                     |             |
| Front Temperature                       | 260 to 280 °C                                                     |             |
| Processing (Melt) Temp                  | 255 to 285 °C                                                     |             |
| Mold Temperature                        | 50.0 to 70.0 °C                                                   |             |
| Injection Rate                          | Moderate-Fast                                                     |             |
| Injection Notes                         |                                                                   |             |
| Processing Temperature Limit: 300°C     |                                                                   |             |