# Technical Data Sheet

## Badamid® A70 GF60 H

PA66-GF60

Polyamide 66 injection moulding grade with 60% glass fibre reinforcement for mechanically and thermally stressed parts

| Properties | Test Conditions | Test Methods | Units | Dry as moulded | conditioned 23° C, 50% r.H. |
|---|---|---|---|---|---|
| **Mechanical Properties** | | | | | |
| Modulus of Elasticity, tensile | 23° C, 1 mm/Min | ISO 527-1/2 | MPa | 21 700 | 20 000 |
| Yield Stress [1] | 23° C, 50 mm/Min | ISO 527-1/2 | MPa | * | * |
| Yield Strain [1] | 23° C, 50 mm/Min | ISO 527-1/2 | % | * | * |
| Nominal Stress at Break [1] | 23° C, 50 mm/Min | ISO 527-1/2 | % | * | * |
| Stress at Break [1] | 23° C, 5 mm/Min | ISO 527-1/2 | MPa | 235 | 185 |
| Strain at Break [1] | 23° C, 5 mm/Min | ISO 527-1/2 | % | 2 | 2 |
| Bending Strength [2] | 23° C | ISO 178 | MPa | - | - |
| Charpy Impact Strength, unnotched [2] | 23° C<br>-30° C | ISO 179/1eU<br>ISO 179/1eU | kJ/m2<br>kJ/m2 | 70<br>- | 80<br>- |
| Notched Charpy Impact Strength [2] | 23° C<br>-30° C | ISO 179/1eA<br>ISO 179/1eA | kJ/m2<br>kJ/m2 | -<br>- | -<br>- |
| Izod notched Impact Strength [2] | 23° C<br>-30° C | ISO 180/1A<br>ISO 180/1A | kJ/m2<br>kJ/m2 | -<br>- | -<br>- |
| **Thermal Properties** | | | | | |
| Melting Temperature [3] | 10 K/Min | ISO 3146 | °C | 262 | * |
| Temperature of Deflection under Load [4] | 0,45 MPa<br>1,8 MPa | ISO 75-1/2<br>ISO 75-1/2 | °C<br>°C | 250<br>250 | *<br>* |
| Coefficient of Linear Thermal Elongation [5] | parallel direction<br>transverse direction | DIN 53752<br>DIN 53752 | E-4/K<br>E-4/K | 0.14<br>0.57 | *<br>* |
| Maximum Service Temperature | some hours<br>20 000 h<br>50 % Decrease in Tensile Strength or Yield Stress | -<br>IEC 216 | °C<br>°C | 230<br>110 | *<br>* |
| Flammability [6] | 0,8 mm<br>1,6 mm | UL 94<br>UL 94 | Class<br>Class | HB<br>HB | *<br>* |
| Glow Wire Test | 0,75 mm / 1,6 mm<br>0,75 mm / 1,6 mm | GWIT<br>GWFI | IEC-60695-2-13<br>IEC-60695-2-12 | -<br>- | *<br>* |
| **Electric Properties** | | | | | |
| Relative Permittivity [7] | 1 MHz | IEC 250 | - | 3.8 | 6.4 |
| Dissipation Factor [7] | 1 MHz | IEC 250 | E-4 | 150 | 1 690 |
| Specific Volume Resistivity [7] | - | IEC 93 | Ohm cm | $10^{15}$ | $10^{12}$ |
| Specific Surface Resistivity [7] | - | IEC 93 | Ohm | $10^{12}$ | $10^{10}$ |
| Dielectric Strength [7] | - | IEC 243-1 | kV/mm | 35 | 30 |
| Comparative Tracking Index | - | IEC 112 | V | 500 | - |
| **Other data** | | | | | |
| Water Absorption | 23° C, Saturation | ISO 62 | % | 4.0 | * |
| Moisture Absorption | 23° C, 50 % r.H. | ISO 62 | % | 1.2 | * |
| Density | 23° C | ISO 1183 | g/ccm | 1.67 | - |
| **Processing** | | | | | |
| Melt Temperature | - | - | °C | 285 – 305 | * |
| Tool Surface Temperature | - | - | °C | 80 – 110 | * |
| Drying Temperature | - | - | °C | 80 | * |
| Drying Time | - | - | h | 2 – 4 | * |

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