

# Badamid® B70 GK30

Polyamide 6

Bada AG

## Message:

30% glass beads reinforced injection moulding grade with superior mechanical properties and high dimensional stability

| General Information                           |      |                                 |                   |             |
|-----------------------------------------------|------|---------------------------------|-------------------|-------------|
| Filler / Reinforcement                        |      | Glass Bead,30% Filler by Weight |                   |             |
| Features                                      |      | Good Dimensional Stability      |                   |             |
| Forms                                         |      | Pellets                         |                   |             |
| Physical                                      | Dry  | Conditioned                     | Unit              | Test Method |
| Density                                       | 1.32 | --                              | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption                              |      |                                 |                   | ISO 62      |
| Saturation, 23°C                              | 7.0  | --                              | %                 |             |
| Equilibrium, 23°C, 50% RH                     | 2.1  | --                              | %                 |             |
| Mechanical                                    | Dry  | Conditioned                     | Unit              | Test Method |
| Tensile Modulus (23°C)                        | 4500 | 1900                            | MPa               | ISO 527-2/1 |
| Tensile Stress <sup>1</sup> (Break, 23°C)     | 80.0 | 55.0                            | MPa               | ISO 527-2/5 |
| Tensile Strain <sup>2</sup> (Break, 23°C)     | 8.0  | 12                              | %                 | ISO 527-2/5 |
| Impact                                        | Dry  | Conditioned                     | Unit              | Test Method |
| Charpy Notched Impact Strength <sup>3</sup>   |      |                                 |                   | ISO 179/1eA |
| -30°C                                         | 5.0  | 6.0                             | kJ/m <sup>2</sup> |             |
| 23°C                                          | 5.0  | 11                              | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength <sup>4</sup> |      |                                 |                   | ISO 179/1eU |
| -30°C                                         | 35   | 55                              | kJ/m <sup>2</sup> |             |
| 23°C                                          | 45   | 70                              | kJ/m <sup>2</sup> |             |
| Notched Izod Impact Strength <sup>5</sup>     |      |                                 |                   | ISO 180/1A  |
| -30°C                                         | 5.0  | 5.0                             | kJ/m <sup>2</sup> |             |
| 23°C                                          | 5.0  | 9.0                             | kJ/m <sup>2</sup> |             |
| Thermal                                       | Dry  | Conditioned                     | Unit              | Test Method |
| Heat Deflection Temperature <sup>6</sup>      |      |                                 |                   |             |
| 0.45 MPa, Unannealed                          | 180  | --                              | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed                           | 90.0 | --                              | °C                | ISO 75-2/A  |
| Melting Temperature (DSC) <sup>7</sup>        |      |                                 |                   |             |
|                                               | 222  | --                              | °C                | ISO 3146    |

|                                             |              |             |         |             |
|---------------------------------------------|--------------|-------------|---------|-------------|
| Maximum Service Temperature                 |              |             |         | IEC 216     |
| 20000 hrs                                   | 100          | --          | °C      |             |
| some hours                                  | 195          | --          | °C      |             |
| Electrical                                  | Dry          | Conditioned | Unit    | Test Method |
| Surface Resistivity <sup>8</sup>            | 1.0E+12      | 1.0E+10     | ohms    | IEC 60093   |
| Volume Resistivity <sup>9</sup>             | 1.0E+15      | 1.0E+12     | ohms·cm | IEC 60093   |
| Relative Permittivity <sup>10</sup> (1 MHz) | 3.70         | 6.10        |         | IEC 60250   |
| Dissipation Factor <sup>11</sup> (1 MHz)    | 0.022        | 0.21        |         | IEC 60250   |
| Comparative Tracking Index                  | 500          | --          | V       | IEC 60112   |
| Flammability                                | Dry          | Conditioned | Unit    | Test Method |
| Flame Rating                                |              |             |         | UL 94       |
| 0.800 mm                                    | HB           | --          |         |             |
| 1.60 mm                                     | HB           | --          |         |             |
| Injection                                   | Dry          | Unit        |         |             |
| Drying Temperature                          | 80.0         |             | °C      |             |
| Drying Time                                 | 2.0 to 4.0   |             | hr      |             |
| Processing (Melt) Temp                      | 260 to 280   |             | °C      |             |
| Mold Temperature                            | 80.0 to 90.0 |             | °C      |             |
| NOTE                                        |              |             |         |             |

|     |                                            |
|-----|--------------------------------------------|
| 1.  | Test Specimen accordng to ISO 3167, Type A |
| 2.  | Test Specimen accordng to ISO 3167, Type A |
| 3.  | 80x10x4 mm                                 |
| 4.  | 80x10x4 mm                                 |
| 5.  | 80x10x4 mm                                 |
| 6.  | 110x10x4mm                                 |
| 7.  | 10 K/min, Compounded for moulding          |
| 8.  | 80x80x1 mm                                 |
| 9.  | 80x80x1 mm                                 |
| 10. | 80x80x1 mm                                 |
| 11. | 80x80x1 mm                                 |

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