



*get the difference*

# BADAMID® | B70 GF30 TM-Z3

PA6-I-GF30

PA6 injection molding grade, 30% glass fibres, highly impact modified for technical articles with high strength and toughness

| Properties                              | Test conditions              | Test method  | Unit   | dry as molded          | conditioned<br>23 °C, 50 % r.F. |
|---|------------------------------|--|--|------------------------|---------------------------------|
| <b>Mechanical Properties</b>            |                              |  |  |                        |                                 |
| Tensile Modulus                         | 23°C, 1 mm/Min               | ISO 527-1/2  | MPa  | 8400                   | 5400                            |
| Tensile Strength at yield               | 23°C, 50 mm/Min              | ISO 527-1/2  | MPa  | -                      | -                               |
| Tensile strain at yield                 | 23°C, 50 mm/Min              | ISO 527-1/2  | %  | -                      | -                               |
| Nominal strain at yield                 | 23°C, 50 mm/Min              | ISO 527-1/2  | %  | -                      | -                               |
| Tensile stress at break                 | 23°C, 5 mm/Min               | ISO 527-1/2  | MPa  | 130                    | 110                             |
| Tensile strain at break                 | 23°C, 5 mm/Min               | ISO 527-1/2  | %  | 3.5                    | 6                               |
| Flexural Modulus                        | 23°C                         | ISO 178  | MPa  | -                      | -                               |
| Flexural Strength                       | 23°C                         | ISO 178  | MPa  | 220                    | 190                             |
| Charpy Impact Strength                  | 23°C<br>-30°C                | ISO 179/1eU<br>ISO 179/1eU   | kJ/m <sup>2</sup><br>kJ/m <sup>2</sup>   | 90<br>75               | 100                             |
| Charpy Notched Impact Strength          | 23°C<br>-30°C                | ISO 179/1eA<br>ISO 179/1eA   | kJ/m <sup>2</sup><br>kJ/m <sup>2</sup>   | 18<br>-                | 30                              |
| Izod Notched Impact Strength            | 23°C<br>-30°C                | ISO 180/1A<br>ISO 180/1A   | kJ/m <sup>2</sup><br>kJ/m <sup>2</sup>   | -<br>-                 | -                               |
| Ball indentation hardness               | 358 N                        | ISO 2039-1   | MPa  | -                      | -                               |
| <b>Thermal Properties</b>               |                              |  |  |                        |                                 |
| Melting temperature                     | 10 K/min                     | ISO 3146   | °C   | 222                    |                                 |
| Temperature of deflection under load    | 0,45 MPa<br>1,8 MPa<br>8 MPa | ISO 75-1/2<br>ISO 75-1/2<br>ISO 75-1/2                               | °C<br>°C<br>°C   | 200<br>185<br>-        |                                 |
| Coefficient of linear thermal expansion | parallel<br>across           | ISO 11359-2<br>ISO 11359-2   | E-4/K<br>E-4/K   | 0.23<br>0.63           |                                 |
| Thermal conductivity                    | Test plate 2 mm              | DIN 52612-1  | W/(m*K)  | -                      |                                 |
| Maximum service temperature             | some hours<br>20.000 h       | IEC-60216<br>IEC-60216   | °C<br>°C   | 180<br>90              |                                 |
| Flammability                            |                              | UL94<br>UL94<br>UL94<br>UL94   | Wall thickness<br>mm<br>Rating<br>Wall thickness<br>mm<br>Rating                 | 0.8<br>HB<br>1.6<br>HB |                                 |
| Glow wire test GWIT                     |                              | IEC-60695-2-13<br>IEC-60695-2-13<br>IEC-60695-2-13<br>IEC-60695-2-13 | Wall thickness<br>mm<br>Temperature °C<br>Wall thickness<br>mm<br>Temperature °C | -<br>-<br>-<br>-       |                                 |
| Glow wire test GWFI                     |                              | IEC-60695-2-12<br>IEC-60695-2-12<br>IEC-60695-2-12<br>IEC-60695-2-12 | Wall thickness<br>mm<br>Temperature °C<br>Wall thickness<br>mm<br>Temperature °C | -<br>-<br>-<br>-       |                                 |



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|-------------------------------------|-----------------------------------|----------------------------------|------------------------------------|---------------|---------------------------------|
| <b>Electrical Properties</b>        |                                   |                                  |                                    |               |                                 |
| Relative Permittivity               | 1 MHz                             | IEC-62631-2-1                    | -                                  | 3.7           | 6.7                             |
| Dissipation Factor                  | 1 MHz                             | IEC-62631-2-1                    | E-4                                | 230           | 2200                            |
| Spec. Volume Resistivity            | -                                 | IEC-62631-3-1                    | Ohm*cm                             | 1E15          | 1E12                            |
| Spec. Surface Resistivity           | -                                 | IEC-62631-3-2                    | Ohm                                | 1E12          | 1E10                            |
| Dielectric Strength                 | -                                 | IEC-60243-1                      | kV/mm                              | -             | -                               |
| Comparative Tracking Index (CTI)    | -                                 | IEC-60112                        | V                                  | 500           | -                               |
| <b>Other Data</b>                   |                                   |                                  |                                    |               |                                 |
| Water absorption                    | 23°C, Saturation                  | ISO 62                           | %                                  | 5.8           |                                 |
| Moisture absorption                 | 23°C, 50% r.h.                    | ISO 62                           | %                                  | 1.8           |                                 |
| Density                             | 23°C                              | ISO 1183                         | g/cm <sup>3</sup>                  | 1.34          |                                 |
| Melt Volume Rate (MVR)              | Value<br>Temperature<br>Test Load | ISO 1133<br>ISO 1133<br>ISO 1133 | cm <sup>3</sup> /10min<br>°C<br>kg | -<br>-<br>-   |                                 |
| Viscosity number                    | 0,5% in 96%<br>H2SO4              | ISO 307                          | cm <sup>3</sup> /g                 | -             |                                 |
| <b>Processing injection molding</b> |                                   |                                  |                                    |               |                                 |
| Melt temperature                    |                                   |                                  | °C                                 | 270 - 290     |                                 |
| Mold temperature                    |                                   |                                  | °C                                 | 80 - 90       |                                 |
| Guide Value Moisture                |                                   |                                  | %                                  | < 0.15        |                                 |
| Drying temperature                  |                                   |                                  | °C                                 | 80            |                                 |
| Guide Value Drying time             |                                   |                                  | h                                  | 2 - 4         |                                 |

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**Legend**

- = not tested  
NB = No break

Based on our current state of knowledge, this data represents reference values and, unless otherwise stated, stands for uncoloured material. Therefore, it does not constitute a warranty of certain properties, more particularly it is no material specification. It is the responsibility of the processors to check the suitability of the material for a particular application as well as compliance with statutory regulations and intellectual property rights. The data stated above may be modified at any time without prior notice. The information does not imply any contractual obligation on our part, any liability is expressly excluded.