

# Nilamid B G4 FR HF natural



PA6, 20% glass fibre reinforced, flame retardant, halogen and red phosphorous free

|                     | Properties                                 | Conditions      | Unit         | Standard            | Values    |
|---------------------|--------------------------------------------|-----------------|--------------|---------------------|-----------|
| Physical            | Density                                    | 23°C            | g/cm³        | ISO 1183, ASTM D792 | 1,32      |
|                     | Mould shrinkage (parallel)                 | 23°C            | %            | Euronil             | 0,4       |
|                     | Mould shrinkage (normal)                   | 23°C            | %            | Euronil             | 0,6       |
|                     | Moisture absorption in water               | 23°C - 24h      | %            | ISO 62 (based on)   | 1,2       |
|                     |                                            | 23°C saturation | %            | ISO 62 (based on)   | 6,5       |
| Mechanical          | Notched Izod Impact Strength               | 23°C            | KJ/m²        | ISO 180/1A          | 4         |
|                     |                                            | -30°C           | KJ/m²        | ISO 180/1A          | 3         |
|                     | Unnotched Charpy Impact Strength           | 23°C            | KJ/m²        | ISO 179             | 25        |
|                     |                                            | -30°C           | KJ/m²        | ISO 179             | —         |
|                     | Notched Charpy Impact Strength             | 23°C            | KJ/m²        | ISO 179             | 5         |
|                     |                                            | -30°C           | KJ/m²        | ISO 179             | —         |
|                     | Tensile yield stress                       | 23°C            | MPa          | ISO 527, ASTM D638  | 80        |
|                     | Tensile modulus                            | 23°C            | MPa          | ISO 527, ASTM D638  | 5500      |
|                     | Yield strain                               | 23°C            | %            | ISO 527, ASTM D638  | —         |
|                     | Strain at break                            | 23°C            | %            | ISO 527, ASTM D638  | 3,0       |
|                     | Flexural yield strength                    | 23°C            | MPa          | ISO 178, ASTM D790  | 130       |
|                     |                                            | 90°C            | MPa          | ISO 178, ASTM D790  | 85        |
|                     | Flexural Modulus                           | 23°C            | MPa          | ISO 178, ASTM D790  | 6000      |
|                     |                                            | 90°C            | MPa          | ISO 178, ASTM D790  | 2600      |
| Thermal             | VICAT - softening temperature              | 9.8 N           | °C           | ISO 306, ASTM D1525 | 215       |
|                     |                                            | 49 N            | °C           | ISO 306, ASTM D1525 | 206       |
|                     | HDT - temperature of deflection under load | 0.45 N/mm²      | °C           | ISO 75, ASTM D 648  | 205       |
|                     |                                            | 1.82 N/mm²      | °C           | ISO 75, ASTM D 648  | 170       |
|                     | Heat resistance - Ball test                | 125°C           |              | IEC 309             | OK        |
|                     |                                            | 165°C           |              | IEC 309             | OK        |
|                     | Continuous service temperature             | 20000 h         | °C           | IEC 216             | 110       |
| Electrical          | Dielectric Strength                        | 2 mm            | KV/mm        | ASTM D149           | 21        |
|                     | CTI - Comparative Tracking Index           | 3.2 mm, sol. A  | V            | IEC 112, UL 746A    | 550       |
|                     |                                            | 3.2 mm, sol. B  | V            | IEC 112, UL 746A    | 550M      |
| Flame behaviour     | Oxygen Index                               |                 | %            | ASTM D2863          | 25        |
|                     | Flammability rating                        | 3.2 ( 1.6 ) mm  |              | UL 94               | V2 (V2)   |
|                     |                                            | 0.8 ( 0.4 ) mm  |              | UL 94               | V2( _ )   |
|                     | Needle test                                | 2.0 ( 1.0 ) mm  |              | IEC 695-2-2         | OK (OK)   |
|                     | Glow wire Flammability Index               | 3.2 ( 0.8 ) mm  | °C           | IEC 695-2-12        | 960 (960) |
|                     | Glow wire Ignition Temperature             | 3.2 ( 0.8 ) mm  | °C           | IEC 695-2-13        | —         |
| Flammability rating | 355x100x1 mm                               |                 | FMVSS No.302 | SE                  |           |

Technical Data Sheet

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