

# NILAMID® B3 TM2

Polyamide 6

Nilit Plastics

## Message:

NILAMID® B3 TM2 is an unfilled Polyamide 6 (Nylon 6) compound, low wear and friction with molybdenum disulphide.

This compound is intended for injection molding.

NILAMID® B3 TM2 is primarily designed for the Industrial and Consumer industry. It is also suitable for Electrical and Electronic or Automotive applications.

| General Information              |                                     |                   |             |
|----------------------------------|-------------------------------------|-------------------|-------------|
| Additive                         | Molybdenum Disulfide Lubricant (2%) |                   |             |
| Features                         | Good Wear Resistance                |                   |             |
|                                  | Low Friction                        |                   |             |
|                                  | Lubricated                          |                   |             |
| Uses                             | Automotive Applications             |                   |             |
|                                  | Consumer Applications               |                   |             |
|                                  | Electrical/Electronic Applications  |                   |             |
|                                  | Industrial Applications             |                   |             |
| Processing Method                | Injection Molding                   |                   |             |
| Physical                         | Nominal Value                       | Unit              | Test Method |
| Density (23°C)                   | 1.14                                | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage                |                                     |                   | ISO 294-4   |
| Across Flow : 23°C               | 1.0                                 | %                 |             |
| Flow : 23°C                      | 1.0                                 | %                 |             |
| Water Absorption                 |                                     |                   | ISO 62      |
| 23°C, 24 hr                      | 1.6                                 | %                 |             |
| Saturation, 23°C                 | 8.5                                 | %                 |             |
| Mechanical                       | Nominal Value                       | Unit              | Test Method |
| Tensile Modulus (23°C)           | 2500                                | MPa               | ISO 527-2   |
| Tensile Stress (Yield, 23°C)     | 80.0                                | MPa               | ISO 527-2   |
| Tensile Strain                   |                                     |                   | ISO 527-2   |
| Yield, 23°C                      | 4.0                                 | %                 |             |
| Break, 23°C                      | 12                                  | %                 |             |
| Impact                           | Nominal Value                       | Unit              | Test Method |
| Charpy Notched Impact Strength   |                                     |                   | ISO 179/1eA |
| -30°C                            | 3.5                                 | kJ/m <sup>2</sup> |             |
| 23°C                             | 4.0                                 | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength |                                     |                   | ISO 179/1eU |
| 23°C                             | > 300                               | kJ/m <sup>2</sup> |             |

| 30°C                                             | > 300         | kJ/m <sup>2</sup> |                |
|--------------------------------------------------|---------------|-------------------|----------------|
| Notched Izod Impact Strength                     |               |                   | ISO 180/A      |
| -30°C                                            | 3.5           | kJ/m <sup>2</sup> |                |
| 23°C                                             | 4.5           | kJ/m <sup>2</sup> |                |
| Thermal                                          | Nominal Value | Unit              | Test Method    |
| Heat Deflection Temperature                      |               |                   |                |
| 0.45 MPa, Unannealed                             | 195           | °C                | ISO 75-2/B     |
| 1.8 MPa, Unannealed                              | 75.0          | °C                | ISO 75-2/A     |
| Continuous Use Temperature <sup>1</sup>          | 90.0          | °C                | IEC 60216      |
| Ball Pressure Test                               |               |                   | IEC 60695-10-2 |
| 125°C                                            | Pass          |                   |                |
| 165°C                                            | Pass          |                   |                |
| Electrical                                       | Nominal Value | Unit              | Test Method    |
| Surface Resistivity <sup>2</sup>                 | 1.0E+13       | ohms              | IEC 60093      |
| Volume Resistivity (23°C)                        | 1.0E+15       | ohms·cm           | IEC 60093      |
| Electric Strength (2.00 mm)                      | 18            | kV/mm             | IEC 60243-1    |
| Comparative Tracking Index (3.20 mm, Solution A) | 600           | V                 | IEC 60112      |
| Flammability                                     | Nominal Value | Unit              | Test Method    |
| Flame Rating                                     |               |                   | UL 94          |
| 0.800 mm                                         | HB            |                   |                |
| 1.60 mm                                          | HB            |                   |                |
| 3.20 mm                                          | HB            |                   |                |
| Glow Wire Flammability Index                     |               |                   | IEC 60695-2-12 |
| 0.800 mm                                         | 650           | °C                |                |
| 3.20 mm                                          | 650           | °C                |                |
| Oxygen Index                                     | 23            | %                 | ISO 4589-2     |
| NOTE                                             |               |                   |                |
| 1.                                               | 20000 hr      |                   |                |
| 2.                                               | 23°C          |                   |                |

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