

# POLYNIL® P50 H

Polyamide 66

Nilit Plastics

Message:

POLYNIL® P50 H is an unreinforced high amine content Polyamide 66 (Nylon 66) for compounding and alloying. This general pourpose 2.7 viscosity Polyamide 66 resin is FDA compliant.

| General Information                              |                        |                   |             |
|--------------------------------------------------|------------------------|-------------------|-------------|
| Uses                                             | Compounding            |                   |             |
| Agency Ratings                                   | FDA Unspecified Rating |                   |             |
| Processing Method                                | Compounding            |                   |             |
| Physical                                         | Nominal Value          | Unit              | Test Method |
| Density (23°C)                                   | 1.14                   | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption                                 | ISO 62                 |                   |             |
| 23°C, 24 hr                                      | 1.5                    | %                 |             |
| Saturation, 23°C                                 | 8.5                    | %                 |             |
| Mechanical                                       | Nominal Value          | Unit              | Test Method |
| Tensile Modulus (23°C)                           | 3.10                   | MPa               | ISO 527-2   |
| Tensile Stress (Yield, 23°C)                     | 81.0                   | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)                     | 50                     | %                 | ISO 527-2   |
| Flexural Modulus (23°C)                          | 2850                   | MPa               | ISO 178     |
| Flexural Stress (23°C)                           | 120                    | MPa               | ISO 178     |
| Impact                                           | Nominal Value          | Unit              | Test Method |
| Charpy Unnotched Impact Strength (23°C)          | No Break               |                   | ISO 179/1eU |
| Notched Izod Impact Strength                     | ISO 180/A              |                   |             |
| -30°C                                            | 4.5                    | kJ/m <sup>2</sup> |             |
| 23°C                                             | 5.5                    | kJ/m <sup>2</sup> |             |
| Thermal                                          | Nominal Value          | Unit              | Test Method |
| Heat Deflection Temperature                      |                        |                   |             |
| 0.45 MPa, Unannealed                             | 225                    | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed                              | 72.0                   | °C                | ISO 75-2/A  |
| Continuous Use Temperature <sup>1</sup>          | 85.0                   | °C                | IEC 60216   |
| Vicat Softening Temperature                      | 240                    | °C                | ISO 306/B   |
| Ball Pressure Test                               | IEC 60695-10-2         |                   |             |
| 125°C                                            | Pass                   |                   |             |
| 165°C                                            | Pass                   |                   |             |
| Melting Temperature                              | 258                    | °C                |             |
| Electrical                                       | Nominal Value          | Unit              | Test Method |
| 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                       | V-2           |      |                |
| 3.20 mm                        | V-2           |      |                |
| Glow Wire Flammability Index   |               |      | IEC 60695-2-12 |
| 0.800 mm                       | 750           | °C   |                |
| 3.20 mm                        | 850           | °C   |                |
| Glow Wire Ignition Temperature |               |      | IEC 60695-2-13 |
| 0.800 mm                       | 775           | °C   |                |
| 3.20 mm                        | 750           | °C   |                |
| Oxygen Index                   | 28            | %    | ISO 4589-2     |
| NOTE                           |               |      |                |

1. 20000 hr

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