

# TRANSMARE® BIO 18LANF10-0.001

Polylactic Acid

Transmare Compounding B.V.

Message:

TRANSMARE® BIO-18LANF10-0.001 is a 10% bamboo fiber reinforced PLA based biopolymer.

| General Information                                     |                                    |                   |              |
|---------------------------------------------------------|------------------------------------|-------------------|--------------|
| Filler / Reinforcement                                  | Bamboo Fiber, 10% filler by weight |                   |              |
| Features                                                | Updatable resources                |                   |              |
|                                                         | Recyclable materials               |                   |              |
| Forms                                                   | Particles                          |                   |              |
| Processing Method                                       | Injection molding                  |                   |              |
| Physical                                                | Nominal Value                      | Unit              | Test Method  |
| Density                                                 | 1.27                               | g/cm <sup>3</sup> | ISO 1183     |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)               | 10                                 | g/10 min          | ISO 1133     |
| Hardness                                                | Nominal Value                      | Unit              | Test Method  |
| Durometer Hardness (Shore D, Injection Molded)          | 82                                 |                   | ISO 868      |
| Mechanical                                              | Nominal Value                      | Unit              | Test Method  |
| Tensile Modulus (23°C, 4.00 mm, Injection Molded)       | 4330                               | MPa               | ISO 527-2/1  |
| Tensile Stress (Break, 4.00 mm, Injection Molded)       | 61.0                               | MPa               | ISO 527-2/50 |
| Tensile Strain (Break, 4.00 mm, Injection Molded)       | 2.0                                | %                 | ISO 527-2/50 |
| Flexural Modulus (Injection Molded)                     | 4230                               | MPa               | ISO 178      |
| Flexural Stress (Injection Molded)                      | 95.0                               | MPa               | ISO 178      |
| Impact                                                  | Nominal Value                      | Unit              | Test Method  |
| Charpy Notched Impact Strength                          |                                    |                   | ISO 179/1A   |
| -40°C, injection molding                                | 1.6                                | kJ/m <sup>2</sup> | ISO 179/1A   |
| 0°C, injection molding                                  | 2.0                                | kJ/m <sup>2</sup> | ISO 179/1A   |
| 23°C, injection molding                                 | 2.1                                | kJ/m <sup>2</sup> | ISO 179/1A   |
| Charpy Unnotched Impact Strength                        |                                    |                   | ISO 179/1U   |
| -40°C, injection molding                                | 9.7                                | kJ/m <sup>2</sup> | ISO 179/1U   |
| 23°C, injection molding                                 | 9.1                                | kJ/m <sup>2</sup> | ISO 179/1U   |
| Notched Izod Impact (23°C, Injection Molded)            | 2.8                                | kJ/m <sup>2</sup> | ISO 180/1A   |
| Unnotched Izod Impact Strength (23°C, Injection Molded) | 9.0                                | kJ/m <sup>2</sup> | ISO 180/1U   |
| Thermal                                                 | Nominal Value                      | Unit              | Test Method  |

|                             |               |      |            |
|-----------------------------|---------------|------|------------|
| Heat Deflection Temperature |               |      |            |
| 0.45 MPa, not annealed      | 54.0          | °C   | ISO 75-2/B |
| 1.8 MPa, not annealed       | 52.0          | °C   | ISO 75-2/A |
| Vicat Softening Temperature | 62.0          | °C   | ISO 306/A  |
| Injection                   | Nominal Value | Unit |            |
| Rear Temperature            | 165           | °C   |            |
| Middle Temperature          | 175           | °C   |            |
| Front Temperature           | 185           | °C   |            |
| Nozzle Temperature          | 190           | °C   |            |
| Mold Temperature            | 25.0          | °C   |            |
| Injection Rate              | Moderate      |      |            |
| Injection instructions      |               |      |            |

In specific cases pre-drying of this material might be required.

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