

GEHR Plastics ECOGEHR® PLA-LF Polylactic Acid

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Polylactic Acid (PLA) Biopolymer

Material Notes:

PLA-L is a blend of polylactide, lignin, lingo-cellulosic, natural fatty acids, waxes and wood fibers. This material possesses good mechanical properties similar to ABS. This bioplastic has an operating range from -30°C to max 60°C. Properties: Thermoplastic based on renewable raw materials Preparation from environmental friendly raw materials, thus physiologically harmless PLA is biodegradable Disposal by composting resp. incineration. Regional regulations need to be observed. Good mechanical properties similar to ABS High stiffness, modulus of elasticity up to 2740 MPa Good resistance to polar media Applications: Furniture industry Toy industry Mechanical engineering Information provided by GEHR Plastics, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-ECOGEHR-PLA-LF-Polylactic-Acid.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|-----------|-----------|----------|
| Specific Gravity | 1.28 g/cc | 1.28 g/cc | ISO 1183 |
| Water Absorption | 2.0 % | 2.0 % | ISO 62 |
| Moisture Absorption at Equilibrium | 2.0 % | 2.0 % | ISO 62 |

| Mechanical Properties | Metric | English | Comments |
|------------------------------|------------------------|----------------------------|----------|
| Hardness, Shore D | 77 | 77 | ISO 868 |
| Ball Indentation Hardness | 105 MPa | 15200 psi | ISO 2039 |
| Tensile Strength at Break | 33.0 MPa | 4790 psi | ISO 527 |
| Tensile Strength, Yield | 37.0 MPa | 5370 psi | ISO 527 |
| Elongation at Break | 3.0 % | 3.0 % | ISO 527 |
| Elongation at Yield | 2.0 % | 2.0 % | ISO 527 |
| Modulus of Elasticity | 2.80 GPa | 406 ksi | ISO 527 |
| Izod Impact, Notched (ISO) | 3.00 kJ/m ² | 1.43 ft-lb/in ² | ISO 179 |
| Izod Impact, Unnotched (ISO) | 15.0 kJ/m ² | 7.14 ft-lb/in ² | ISO 179 |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|-------------|----------------|----------------|
| CTE, linear | 120 µm/m-°C | 66.7 µin/in-°F | ISO 11359 |
| Melting Point | 120 °C | 248 °F | DIN EN ISO 314 |
| Maximum Service Temperature, Air | 60.0 °C | 140 °F | |

| Thermal Properties | Metric | English | Comments |
|---------------------------|---------|---------|-------------------|
| Vicat Softening Point | 57.2 °C | 135 °F | VST/A/50; ISO 306 |
| Glass Transition Temp, Tg | 120 °C | 248 °F | DIN EN ISO 3146 |

| Descriptive Properties | Value | Comments |
|--------------------------------------|-------|------------|
| Physiological indifference according | Yes | EEC 90/128 |
| | Yes | FDA |

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