



# TECHNICAL DATA SHEET

## PLA HIGH-SPEED

### 1. DESCRIPTION

PLA High-Speed is a specifically designed filament for fast 3D printing. It enables more precise and detailed printing results at far higher speeds than standard PLA. Its superior flow characteristics and rapid cooling make it perfect for applications that require both efficiency and high quality, such as prototyping, design concept visualization, decorative objects, and functional parts. The material is easy to use, works reliably across various 3D printing environments, and delivers warp-free results for consistent and dependable prints – whether you're a beginner or an experienced user.

### 2. FEATURES

- High-speed printing up to 1000 mm/s
- Enhanced flow
- Quick cooling for complex shapes and overhangs
- High impact capability
- Consistent print quality
- Made from renewable raw materials
- Biodegradable (EN 13432)

### 3. PROPERTIES

| TEST                          | METHOD                   | UNIT              | VALUE | PRINT SETTINGS                                                                                                                                                                             |                       |
|-------------------------------|--------------------------|-------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Density                       | ISO 1183                 | g/cm <sup>3</sup> | 1.24  | Nozzle                                                                                                                                                                                     | up to 250°C           |
| Melt flow index (MFI)         | ISO 1133-A               | g/10min           | 23    | Heatbed                                                                                                                                                                                    | 20-60°C               |
| Melt flow index (MFI)         | ISO 1133-A               | g/10min           | 10    | Adhesive                                                                                                                                                                                   | not required          |
| Stereochemical purity         | Total Corbion PLA method | %                 | ≤99   | Speed                                                                                                                                                                                      | up to 1000 mm/s       |
| Residual monomer              | Total Corbion PLA method | %                 | ≤0.3  | Cooling                                                                                                                                                                                    | 30-100%               |
| Water / moisture              | Coulometric Karl-Fischer | ppm               | ≤400  | Enclosed Space                                                                                                                                                                             | no                    |
| Melting temperature           | DSC                      | °C                | 175   | Hardened Nozzle                                                                                                                                                                            | no                    |
| Glass transition temperature  | DSC                      | °C                | 60    | Max. Volumetric Speed                                                                                                                                                                      | 21 mm <sup>3</sup> /s |
| Tensile modulus               | ISO 527-1                | MPa               | 3500  | Recommended settings for printers with a 0.4mm Nozzle.<br>Max. 50% layerheight. Optimal print settings may vary<br>between different printers and also depend on environmental<br>factors. |                       |
| Tensile strength              | ISO 527-1                | MPa               | 50    |                                                                                                                                                                                            |                       |
| Elongation at break           | ISO 527-1                | %                 | ≤5    |                                                                                                                                                                                            |                       |
| Charpy notched impact, 23°C   | ISO 179-1eA              | kJ/m <sup>2</sup> | ≤5    |                                                                                                                                                                                            |                       |
| HTB, amorphous <sup>2</sup>   | ISO 75-1                 | °C                | 60    |                                                                                                                                                                                            |                       |
| HTB, crystalline <sup>2</sup> | ISO 75-1                 | °C                | 105   |                                                                                                                                                                                            |                       |

\*Temperature resistance tested at a minimum wall thickness of 4 mm.

<sup>2</sup>HDT B, 0.45MPa flatwise. HDT depends on processing conditions. For crystalline resins, formulation included 3-7% nucleating agent (Luminy® D070) and making took place in a 90-100°C tool.

### 4. CERTIFICATIONS & ADDITIONAL INFORMATION



FDA  
compliant



RoHS  
compliant



REACH  
compliant



FREE  
of Silicone



DEGRADABLE  
ISO 14885



RECYCABLE

Certifications depend on colors in final product. More info in the additional information sheet.

### 5. STORAGE AND SHELF LIFE

Store in a dry room at room temperature (18-27°C / 65-80°F). Keep out of direct heat and sunlight.

When stored correctly, this material has a shelf life of 2 years.

Additional info in our regulatory, additional information and chemical resistance data sheets.