



Bilby 3D

MATERIAL DATA SAFETY SHEET

Issued in Australia by Bilby 3D Pty Ltd.

The attached Material Data Safety Sheet has been prepared by the manufacturer outside Australia.

In accordance with Australia WHS regulations the following Australian contact details apply

Section 1: AUSTRALIAN COMPANY DETAILS

In Australia the product is imported and distributed by:
Bilby 3D Pty Ltd

Mailing Address :

Kingsgrove Business Centre, 7/192 Kingsgrove Rd, Kingsgrove NSW 2208

Head Office Address :

Kingsgrove Business Centre, 7/192 Kingsgrove Rd, Kingsgrove NSW 2208

Contact Phone: 1800 847 333

Section 2: AUSTRALIAN EMERGENCY CONTACT

Emergency Contact

In the event of an emergency please contact:

Poisons Information Centre 24 hour Telephone Advice Line on 13 11 26

Section 3: AUSTRALIAN ISSUE DATA

Date of Issue : 1 March 2020

Raise3D Hyper Speed PLA Technical Data Sheet

Hyper Speed PLA Filament is one of the specially developed high-speed filament line for FFF printing. During high-speed printing, the filament is rapidly fed into the heat block, and the polymer has very little time to melt itself from solid to a molten state, which can cause nozzle clogging and poor bonding quality between layers.

With optimized molecular weight and tuned flowability, Raise3D Hyper Speed PLA are able to achieve faster melting in the hot end and much prompter cooling after the material is extruded. As a result, the surface quality of parts printed by Hyper Speed filaments is smooth and most of the sharp details are kept. Most importantly, thanks to optimized molecular weight, Hyper Speed PLA shows excellent interlayer bonding quality and Z-direction strength. Therefore, Hyper speed PLA can be used for concept models and figures, prototyping, etc.

Physical Properties

Property	Testing Method	Typical Value
Density (g/cm ³)	ISO 1183, GB/T 1033	1.21
Heat Distortion Temperature (°C)	ISO 75 0.45MPa	53
Melt Flow Index (g/10 min)	190 °C, 2.16 kg	4.5
Water absorption (%)	ISO 62: Method 1	0.4
Odor	/	Almost odorless
Solubility	/	Insoluble in water

Mechanical Properties

Property	Testing Method	Typical Value
Young's modulus (X-Y)	ISO 527, GB/T 1040	2600 ± 215 MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	59 ± 1 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	15.0 ± 0.8 %
Bending modulus	ISO 178, GB/T 9341	2700 ± 154 MPa
Bending strength	ISO 178, GB/T 9341	81 ± 2 MPa
Impact strength	ISO 179, GB/T 1843	4.3 ± 1.3 KJ/m ²



Testing Geometries

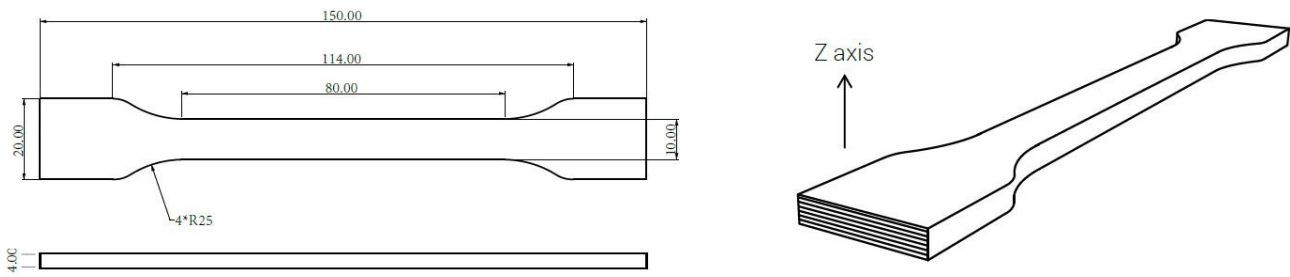


Fig 1. Tensile testing specimen

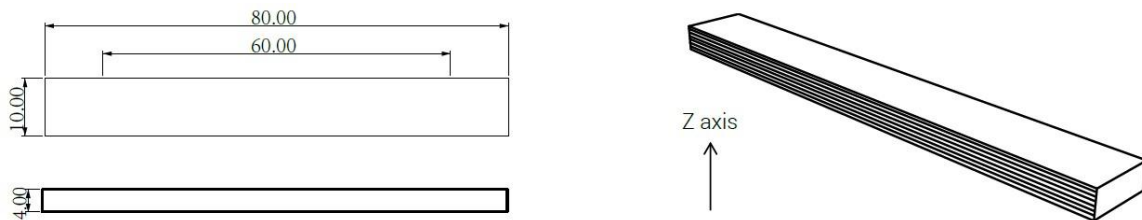


Fig 2. Flexural testing specimen

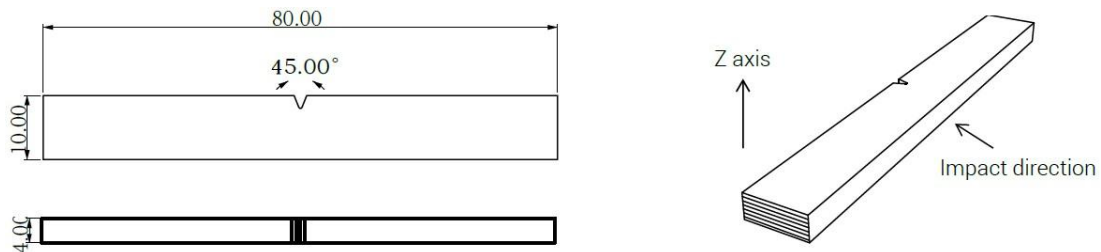


Fig 3. Impact testing specimen

Disclaimer

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. Enduse performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/recycling practices of Raise3D materials for the intended application. Raise3D makes no warranty of any kind, unless announced separately, to the fitness for any particular use or application. Raise3D shall not be made liable for any damage, injury or loss induced from the use of Raise3D materials in any particular application.

