



MATTE rPLA
Earth Tones Collection



PRODUCT RANGE

MATTE rPLA



colour: **Ochre**
diameter: 1.75, 2.85
roll size: 1 kg



colour: **Sage**
diameter: 1.75, 2.85
roll size: 1 kg



colour: **Terracotta**
diameter: 1.75, 2.85
roll size: 1 kg



colour: **Blossom**
diameter: 1.75, 2.85
roll size: 1 kg



colour: **Eggshell**
diameter: 1.75, 2.85
roll size: 1 kg



colour: **Cobalt**
diameter: 1.75, 2.85
roll size: 1 kg

***Custom colouring available with min order quantity of 40kg**

TECHNICAL DATA SHEET

MATTE rPLA

Name	PLA
Chemical name	Recycled polylactide
Source of plastic	Benelux
Description	Reflow PLA filament is made from mechanically recycled PLA which are biodegradable and renewable. It is safe, eco-friendly, easy to print, and fits requirements for both novices and gurus.
Available colours	 ochre terracotta eggshell sage blossom cobalt

FILAMENT SPECIFICATIONS

Diameter	1.75 mm. $\pm 0.05\text{mm}$ / 2.85 mm. $\pm 0.07\text{mm}$
Roundness	$\geq 98\%$
Net filament weight	1 KG
Filament length	$\sim 357\text{m}$ / $\sim 137\text{m}$

PRINTER SETTING RECOMMENDATION

Nozzle recommendation	Hardened steel nozzle
Nozzle temperature	215 - 225°C
Bed temperature	40 - 70°C
Fan speed	0 - 100% (varies based on print geometry)
Print speed	30 - 40 mm/s, up to 150 mm/s
Retraction distance	4 - 10 mm
Retraction speed	35-45 mm/s
Drying recommendation	50 °C in a hot air or vacuum oven for 5 to 8 hours

MATERIAL PROPERTIES

	unit	value	method
Density	g/cm ³	1.24	ASTM D1505
Izod Impact strength	kJ/m ²	4.5	ISO 180 @25°C
Tensile modulus	MPa	3000	ISO 527
Flexural modulus	MPa	3120	ISO 178
Melt flow rate (190 °C/2.16 kg)	g/10 min	3-7	ISO 1133
Glass transition	°C	59.8	ISO11357, 10 °C /min
Peak melting temperature	°C	164.3	ISO11357, 10 °C /min

MECHANICAL PROPERTIES

	unit	value	method
Tensile modulus	MPa	3105±53.16	ISO 527
Tensile strength	MPa	59.2	ISO 527
Tensile stress at break	MPa	59.1	ISO 527
Tensile strain at break	%	2,16	ISO 527
Flexural modulus	MPa	3200±91	ISO 178
Flexural strength	MPa	87.2	ISO 178
Flexural stress at break	MPa	84.6	ISO 178
Flexural strain at break	%	3.6	ISO 178

SAMPLE PREPARATION AND TESTING CONDITIONS

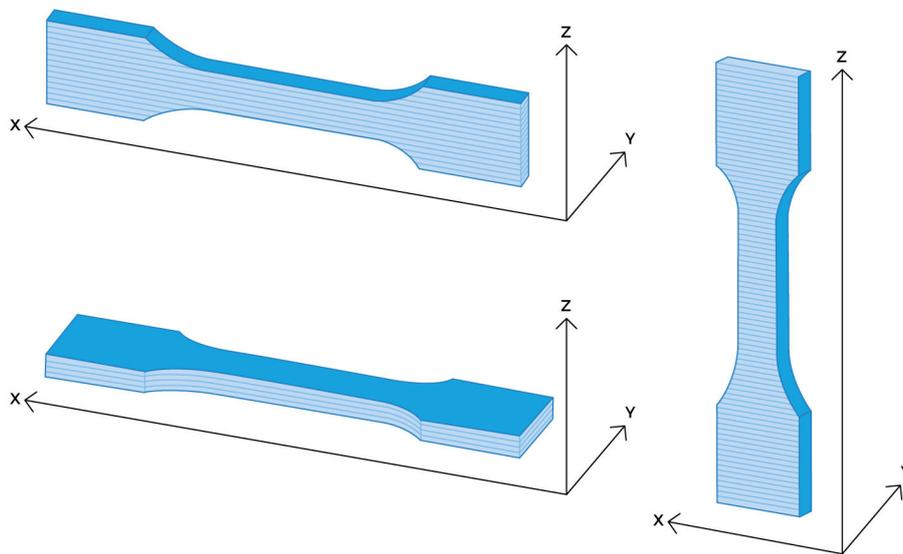
Sample preparation conditions:

Ultremaker 2+ with 0.4 mm nozzle was applied for preparing both tensile and flexural specimens. Line width: 0.35 mm | layer height: 0.2 mm | Printing speed: 15 mm/s | retraction distance and speed: 4 mm and 40 mm/s | printing temperature : 220 °C

Testing conditions:

Five samples were tested and the value shared was the average value.

For tensile specimens, they were printed flatly (x-y direction) and the printing direction was in line with the tensile stretching direction. As for the flexural specimens, the printing direction was perpendicularly to the test direction.



DISCLAIMER

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SOURCE TRACEABILITY

rPLA

Name	Recycled PLA
Chemical name	Polylactic acid, or polylactide
Geographic location	Benelux, Europe
Waste category	Post Industrial
Type of product	Food Packaging

PLA or Polylactic acid is a bioderived plastic and the leading filament choice for creators. Our materials begin life as cornstarch. While PLA can be broken down at the end of life, it does not naturally decompose at speed without industrial composting assistance. As a result, we take PLA packaging and recycle it to create rPLA filament, extending it's life by another cycle. Our rPLA is sourced from a consistent stream of recycled food packaging waste used in fruit boxes, straws and containers. It is collected, sorted and pre processed by a leading recycler in the Benelux region.