

UD-Flax 100

Biodegradability meets performance



About UD-Flax 100

UD-Flax 100 is polylactic acid based unidirectional organosheet / prepreg reinforced with flax fibers.

UD-Flax 100, a completely biodegradable organosheet, is a perfect fit for industries looking for **no waste in end-of-use but high performance** as well.

UD-Flax 100 is typically used to manufacture laminated plates or hybrid & sandwich structures.

UD-Flax 100 has near-zero CTE, hence provide a good processing compatibility with carbon fiber reinforced prepreps.

We offer UD-Flax 100 either **in rolls up to 100 cm wide and 50 m long** or as **flat sheets** in required dimensions.

Key Features & Advantages

- Low eco-impact, 100% biodegradable
- High mechanical performance
- A ready-to-use preform to be shaped into varied geometry and structure
- Suitable for thermoforming processes; compression moulding, vacuum moulding, injection overmolding and automated tape laying
- Compatible with varied structures such as woven fabrics, mats and honeycomb
- Clean-tech, produced without effluent, hazardous air pollutants and waste; no VOC emission, non-allergenic
- Affordable; better price/performance than counterparts in the market
- Tailor-made production via customized weight and thickness

Field of Uses

UD-Flax 100 is suitable for any application requiring perfect biodegradability with performance. Just to provide insight, such applications could include, but not limited to the following;

- Completely green consumer product design; e.g. daily-use products, furniture, white-goods
- Interior / biodegradable architecture applications; e.g. indoor accessories for green concept hotels & office spaces
- Composite applications considering the product's end-of-use

Specifications

Fiber Content	50%
Weight	325 g/m ²
Thickness	0.25 mm
Width	up to 100 cm
Length	up to 50 m
Density	1.3 g/cm ³

Mechanical Properties*

Tensile Modulus	11 ± 1 GPa
Tensile Strength	140 ± 15 MPa
Elongation at Break	2 – 2.5 %
Flexural Modulus	8 ± 0.5 GPa
Flexural Strength	105 ± 20 MPa

* UD laminates of 8 plies UD-Flax 100 were tested according to ISO 527 for tensile, ISO 14125 for flexural.

Processing Guidelines

- Suitable with thermoforming processes, contact or IR heater can be used.
- Recommended process temperature is 190 °C - 210 °C.
- No specific precautions in handling and during composite manufacturing is required as UD-Flax is bio-based product.
- No need for cold-chain storage as UD-Flax is a thermoplastic based prepreg
- Recommended storage condition is at moderate temperature, away from humidity and in their original packaging.