

## Use Case

### YUYO Natural Surfboard made with the sustainable filament Ultrafuse® rPET

#### Application

YUYO is a young and very innovative company. The business was founded in October 2018, with the idea in mind that more than 90% of surfers are highly concerned about ocean health, but most of them are still surfing on boards that are pollutive, non-recyclable and particularly toxic to ocean life. After two years of research and development, YUYO found a way to resolve this paradox. Romain Paul from YUYO: "We have developed a new kind of eco-designed surfboards, exclusively made of natural and recycled materials." Their surfboards have a 3D-printed internal structure made of the advanced Ultrafuse rPET filament, an environmentally friendly PET made of recycled medical appliances, and are manufactured on a large-format industrial 3D printer. The rPET core is covered with a layer of biocomposite, which results in an eco-friendly surfboard – the YUYO Natural Surfboard.



#### Benefits at a Glance

- Sustainable alternative to PET
- Easy to print
- Consistently outstanding end result

#### Material Properties

##### Why Use this Filament?

YUYO's core goal is to offer any surfer a natural and sustainable alternative when buying a new surfboard, which makes it priority one that the surfboard is created with environmentally friendly materials. And together with the customization possibilities of 3D printing, the choice to go for a recycled filament is evident. However, the difficulty with recycled filaments is to maintain constant high quality and consistently superb 3D printing results. In their search, YUYO discovered that there is only one recycled filament that met their requirements: Ultrafuse rPET. Where other recycled filaments fail, Ultrafuse rPET succeeds: It always delivers the exact same characteristics, for instance identical viscosity and filament diameter. Ultrafuse rPET prints as reliably as a regular top-grade virgin PET filament. "With Ultrafuse rPET we now have a filament that delivers the printing experience that we demand – every single time", Romain confirms. YUYO uses the 2.5 kg filament spools. 3D printer used: Tobeca 6613, a very large-format printer by French manufacturer Tobeca, which develops bespoke 3D printers for and with individual customers.



## Our Recommended Print Settings

Nozzle Temperature	225-245°C
Bed Temperature	65-85°C
Nozzle Diameter	≥0.4 mm
Bed Modification	Adhesive spray or glue
Print Speed	30-60 mm / s

