

ReForm

ReForm is a sustainable initiative within Formfutura to efficiently manage residual extrusion waste streams and re-use them into high-end upcycled filaments. The ideology behind ReForm is to make 3D printing more sustainable – without having to make compromises on material properties – and yet keep it affordable.

ReForm comes in several materials - namely rPLA, rPET, and rTitan – which are based on exactly the same unique formulations as respectively our EasyFil PLA, HDglass, and TitanX filament ranges, but are made out of residual extrusion waste streams which are re-compounded and homogenized into high-end filaments with significantly less environmental impact.

With our ReForm initiative we aim to reduce waste streams, make 3D printing more sustainable, and make upcycled/recycled filament significantly more affordable.

Unique features

- 100% upcycled/recycled filament with retaining the unsurpassed printing properties of their EasyFil PLA, HDglass, and TitanX virgin grade counterparts.
 - Less environmental impact by quality controlling and re-using extrusion waste streams
- Sustainable packaging
 - ReForm filaments are spooled on easy to recycle and dispose recycled cardboard spools
 - ReForm filament is packaged in recycled carton boxes
- Easy to print
- Affordable, but high-end upcycled/recycled filament

Controlling extrusion waste streams and re-usage into ReForm

The production of filaments is a precise job with many parameters that influence the final outcome. There is always a certain % of fall out with extrusion during the start-up and outflow or when a filament does not meet our tight diameter tolerance requirements. Even as they are considered residual waste streams, they are still perfectly fine materials. In an effort to re-use (upcycle) this continuous material flow rather than destroying them (which has a huge impact on the environment) we've started a sustainable project to give these materials a second life in the form of our "ReForm filament". ReForm filaments are based on exactly the same formulation as their virgin grade counterpart filaments. By controlling extrusion fall out and assure its pureness these continuous fall out streams are now re-compounded and homogenized into high-end ReForm filaments, which are currently only available in an off black colour.

Sustainable packaging

There is no doubt that all packaging materials have some sort of impact on the environment. The question is what types have the greatest impact, or least impact. In order to empower the underlying ideology of sustainability all ReForm materials will come on spools made from recycled cardboard and are also packaged in recycled cardboard boxes. Cardboard spools and boxes have much less environmental impact and can be disposed of easily after usage with your household garbage or local paper recycling point.

General printing guidelines *

ReForm rPLA		
Nozzle size: $\geq 0.15\text{mm}$	Layer height: $\geq 0.1\text{mm}$	Flow rate: $\pm 100\%$
Print temp: $\pm 180 - 220^\circ\text{C}$	Print speed: Medium	Retraction: Yes - 5mm
Heat bed: $\pm 0 - 60^\circ\text{C}$	Fan speed: 50-100%	Experience level: Beginner

ReForm rPET		
Nozzle size: $\geq 0.15\text{mm}$	Layer height: $\geq 0.1\text{mm}$	Flow rate: $\pm 110\%$
Print temp: $\pm 195 - 225^\circ\text{C}$	Print speed: High	Retraction: Yes - 6mm
Heat bed: $\pm 65 - 75^\circ\text{C}$	Fan speed: 50-100%	Experience level: Beginner

ReForm rTitan		
Nozzle size: $\geq 0.15\text{mm}$	Layer height: $\geq 0.1\text{mm}$	Flow rate: $\pm 106\%$
Print temp: $\pm 240 - 260^\circ\text{C}$	Print speed: Medium	Retraction: Yes - 5mm
Heat bed: $\pm 80 - 90^\circ\text{C}$	Fan speed: 0-25%	Experience level: Beginner / Intermediate

*) Above displayed settings are meant as guidance to find your optimal print settings. These ranges in settings should work for most printers, but please do feel free to experiment outside these ranges if you think it is suitable for your printer. There are a lot of different type of printers, hot-ends and printer offsets that it is extremely difficult to give an overall one-size-fits-all setting.

ReFORM
SUSTAINABILITY BY FORMFUTURA

rPLA • rPET • rTitan



A product by Formfutura

Filament length

ReForm rPLA					
ρ : 1.24 g/cc	50 gr coil	1 Kg spool			
Ø 1.75mm	± 16.8m	± 335m			
Ø 2.85mm	± 6.3m	± 126m			

ReForm rPET					
ρ : 1.27 g/cc	50 gr coil	1 Kg spool			
Ø 1.75mm	± 16.4m	± 327m			
Ø 2.85mm	± 6.2m	± 123m			

ReForm rTitan					
ρ : 1.10 g/cc	50 gr coil	1 Kg spool			
Ø 1.75mm	± 18.9m	± 378m			
Ø 2.85mm	± 7.1m	± 143m			

Product export information

HS Code: 39169090	Description: Monofilament	Country of origin: the Netherlands
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Product images

ReForm rPLA	ReForm rPET	ReForm rTitan
		



**) RoHS & REACH compliance in accordance with: RoHS Directive 2011/65/EC -&- REACH Directive 1907/2006/EC.*

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