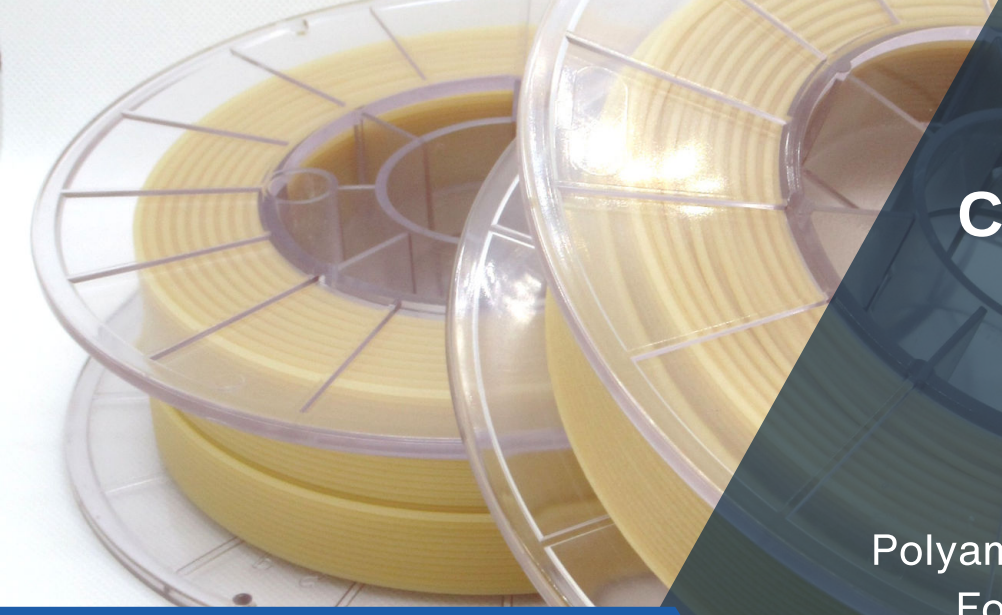


AsahiKASEI

Cellulose Nanofiber Reinforced PA for 3D Printing

Biobased Filler-reinforced Polyamide for Achieving Excellent Formability and High Strength

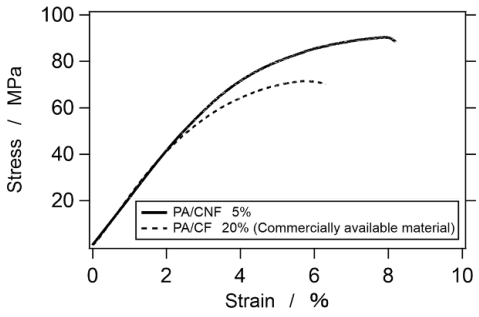
Cellulose Technology

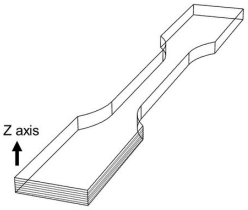
For more than 90 years Asahi Kasei has been using cotton linter, a byproduct of the cotton yield, as raw material for various products. Building on this rich know-how, the company is now adapting this material as for 3D printing.

The unique viscosity properties of cellulose nanofibers (CNF) reinforced polyamides make them suitable for material extrusion 3D printers. Furthermore, compared to glass fibers, CNF boasts a superior material recyclability.

Key Properties for 3D Printing

- Good formability
- High modeling accuracy
- Smooth appearance
- Excellent mechanical properties
- Color-variable

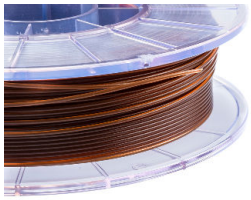




Pitch	0.2mm
Wall	2
Infill	100%

Application Fields

Material extrusion 3D printing
for prototypes, industrial products, etc.



Sustainability

- The raw material of CNF is cotton linter derived from non-edible plants
- Mechanical recyclability of CNFRP is superior to that of GFRP
- Can be combined with various types of PA
  - e.g., Combining our biomass polyamide (PA610) with 10% CNF gives a biobased material ratio of 65%

Creating for Tomorrow

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Version 1.0, October 2023