

Ultrasint® AP26

BASF 3D Printing Solutions (B3DPS)

Status November 2022



Ultrasint® AP26: **Summary**

- Name: **Ultrasint® AP26**
- Article no.: **300103**
- Color: **White/Cream**
- Packaging size: **20 kg**
- General availability : **November 2022**
- Printing Parameters Available for: **Farsoon, EOS P1, Prodways (only tested on P1000 – open parameter kit required), 3D Systems**

- Preliminary mechanical data:


Mechanical Properties	X	Z
Tensile Strength [MPa]	40	30
E-Modulus [MPa]	2500	2500
Elongation at Break [%]	2.5	2
Charpy Impact (unnotched) [kJ/m ²]	12	n.a

Value Proposition



Sell More

COST FOR VALUE

- **Lowest price per kg in PBF portfolio!**
- High **reusability rate of up to 100%** - Zero waste! 

HIGH QUALITY PARTS

- Excellent surface finish - perfect for early prototyping
- High resolution detail ideal for complex shapes
- Sturdy and fit part – Not cheap feeling!

Easy to Print

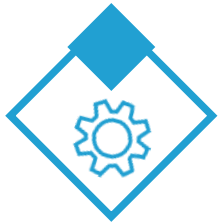
PRINTING FRIENDLY

- Outstanding flowability
- Printing parameters available
- Large temperature window
- High process stability

Supportive Team – BASF Forward AM works with you in every step of the way

Performance & Applications

Processing & Part performance



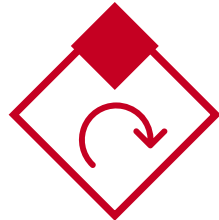
High detail resolution & surface quality



Zero waste, high recyclability

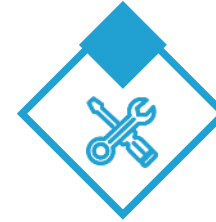


High strength & stiffness



No flexible & thin-walled parts

Applications & Economics



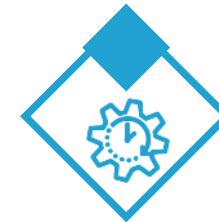
Rigid tooling, abrasion proof fixtures



Affordable series parts



#1 in cost per part



Design models & Functional prototypes

Tests & Certifications

- Other tests to be performed under request with potential business behind
 - ▶ **Electrical Applications:** *Results available under request*
 - Specific Volume Resistivity IEC 62631-3-1
 - Specific Surface Resistivity IEC 62631-3-2
 - Dielectric Strength IEC 60243-1
 - ▶ **Food Contact Statement:**
 - A Food Contact Statement **is currently not possible**. Please still approach us if you find an application with a high business potential that might need it.

Post Processing

Color dyeing possible

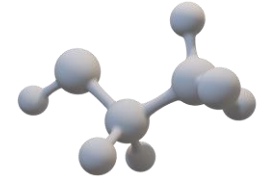
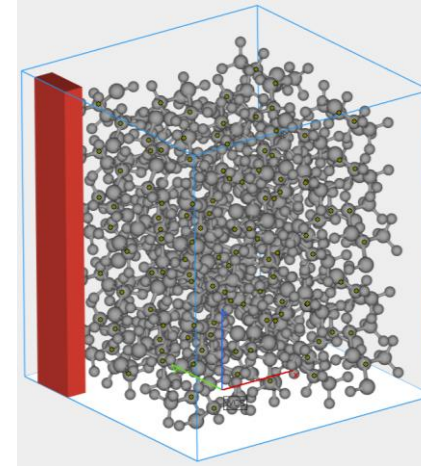
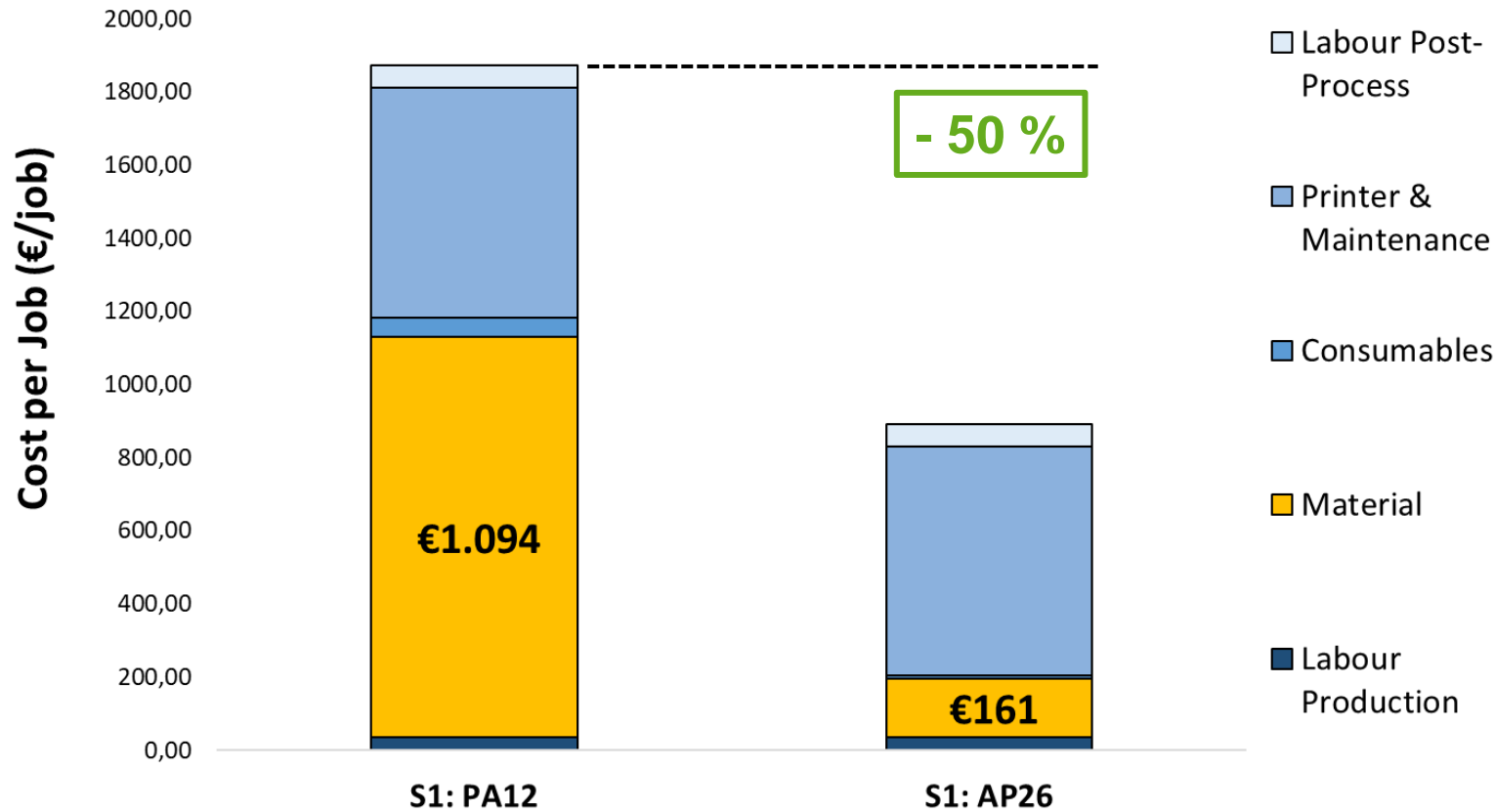


Coating, UV coating (tests ongoing)



Cost Analysis: Prototyping – SLS - AP26 vs. PA12

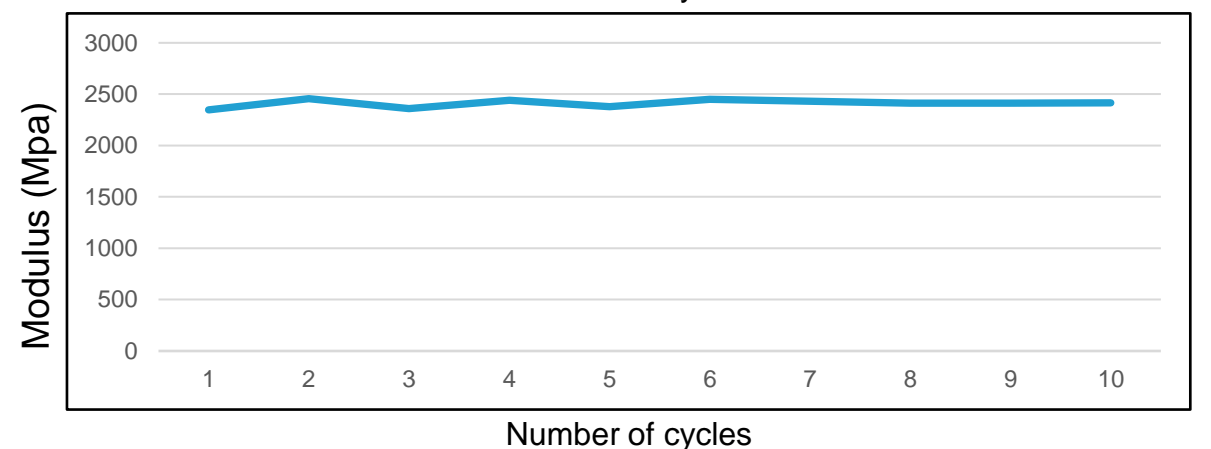
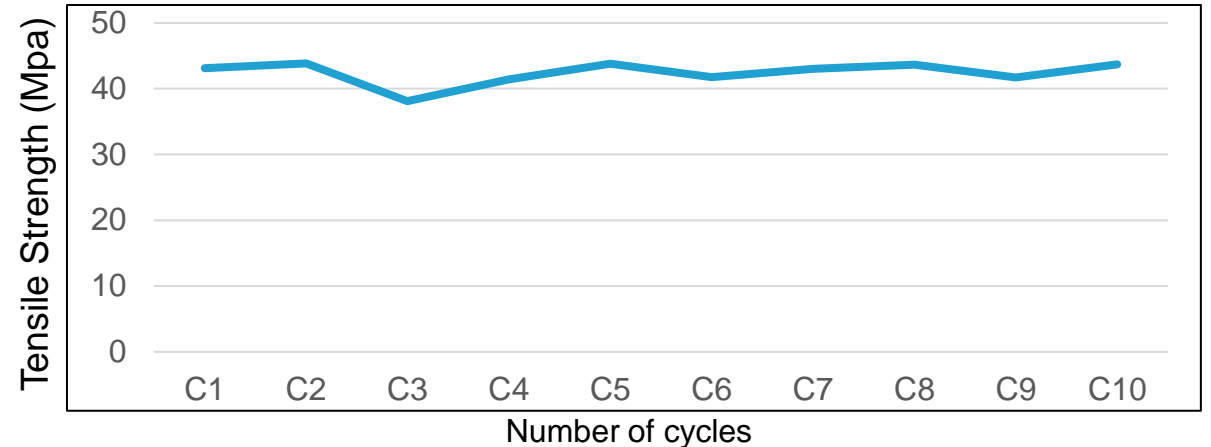
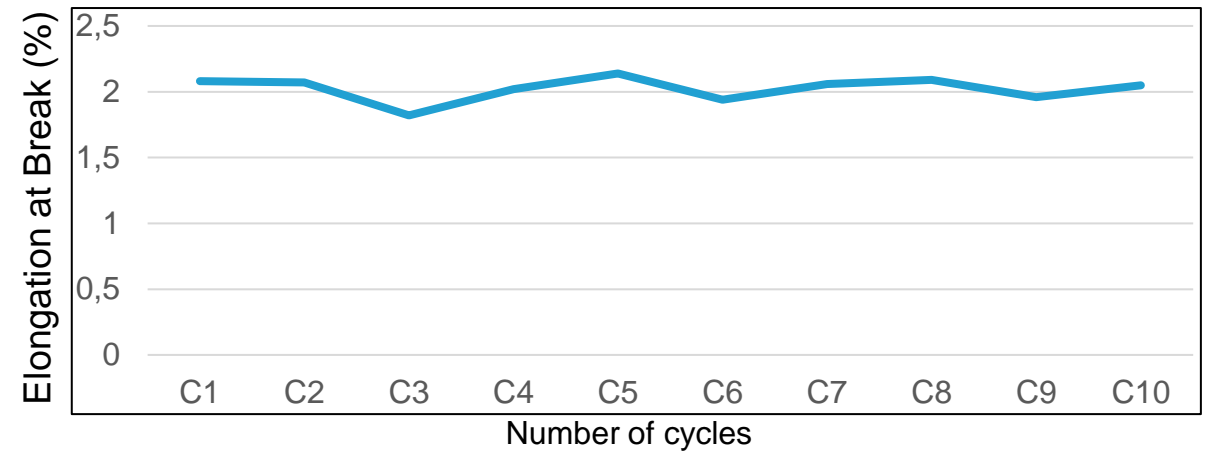
Scenario 1 - Prototyping: PA12 vs. BASF Ultrasint AP26




- ✓ **50% lower cost per job**
- ✓ **85% lower material costs** due to lower material price and 100% refresh rate

Processability and Consistency:

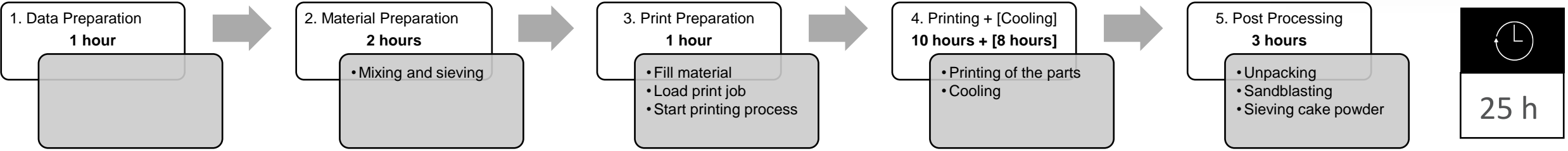
- Long-term study regarding refresh rate finished - **0 % is possible!**
- 100 % cake powder was used for 10 cycles in a row
- Post processing is very easy
 - Cake hardness & Flowability comparable to Ultrasint PA11
- Limitations on the wall thickness of printed parts depend on the printer hardware. Technologically, wall thicknesses of up to 0.5 mm can be printed. Application-related rather 1-2 mm - it ultimately depends on the final geometry.



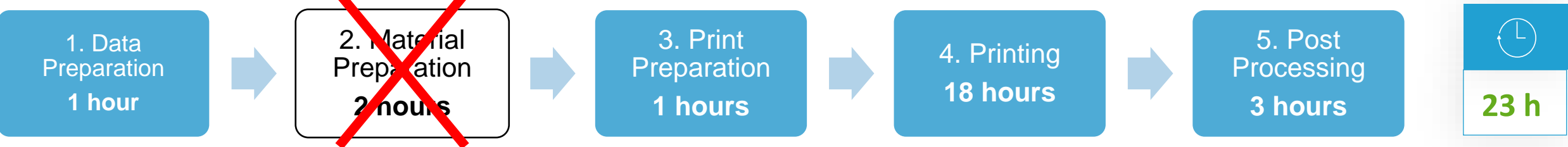
SLS Workflow Visualization – Time saving per build job


Printer – Farsoon HT403
Full buildjob considered
Times are estimations

Traditional PA12 with 50% refresh ratio



AP26 with 100% refresh ratio



 - **BASF**

We create chemistry



FORWARD AM

Innovating Additive Manufacturing