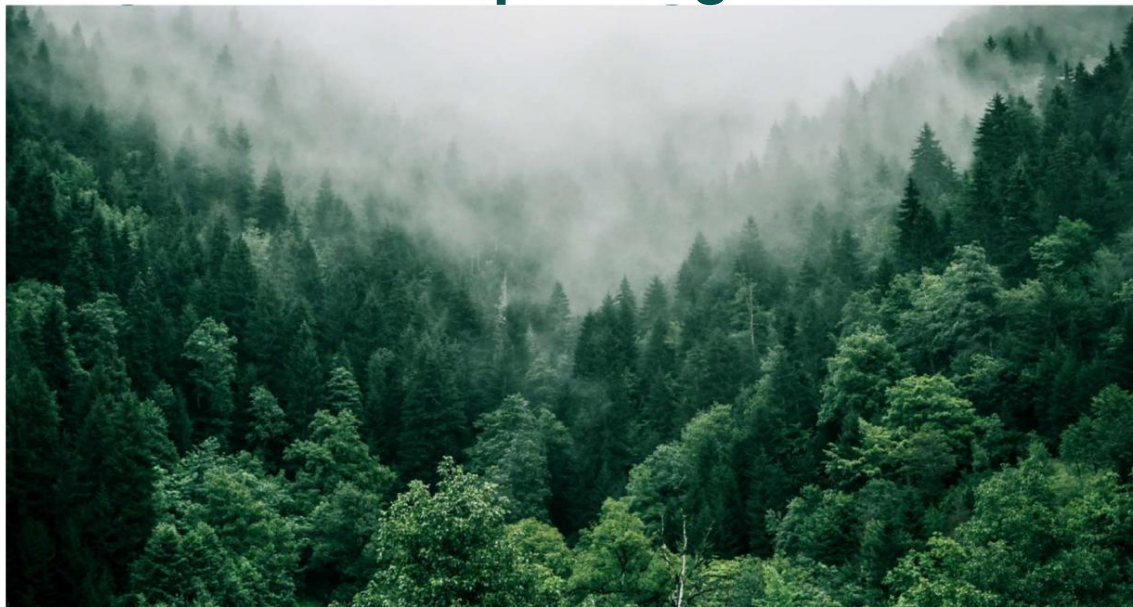


## 3D901 – Biocomposite with forest residues for 3D printing



3D901 is a bioplastic, based on PLA, suitable for use in 3D printing. It contains 20% wood fiber that comes as a residual product from the Swedish forest. The formulation is based on a high proportion of renewable raw materials, which allows a reduction in the carbon footprint by up to 94% compared to conventional fossil-based plastics.

### Environmental

benefits 3D901 has been developed to be a sustainable alternative to fossil-based plastics for 3D printing. A high proportion of the raw material comes from renewable sources.

According to life cycle assessment (LCA) calculations, 3D901 has a global warming potential (GWP) of 0.23 kg CO<sub>2</sub> eq./kg manufactured material (incl. biogenic carbon, cradle-to-gate)\* when chemically recycled PLA and a higher proportion of bio-based ingredients are used. This is significantly lower than for conventional plastics (see diagram below) and shows how switching to BIQ Materials 3D901 significantly reduces the CO<sub>2</sub> footprint of your company's products. The GWP for 3D901 without recycled PLA and with a slightly lower renewable content is 1.39 kg CO<sub>2</sub> eq./kg manufactured material (incl. biogenic carbon).

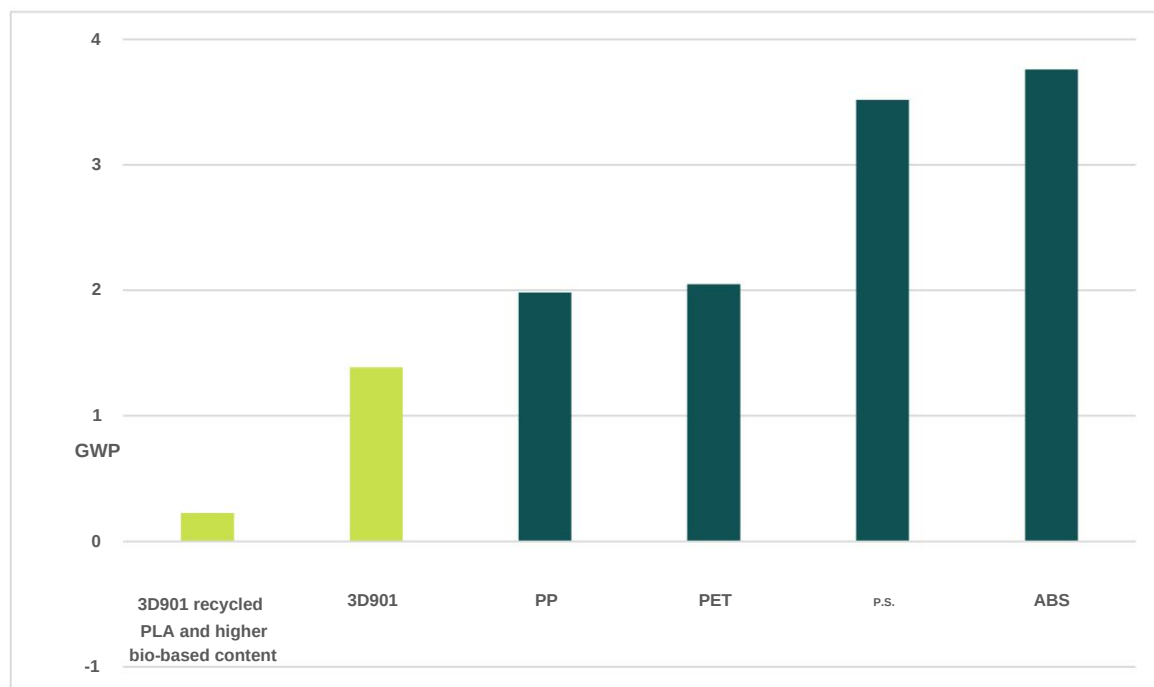
Please contact us so we can discuss how you can improve the environmental profile of your products.

\* The CCaLC2 software, version 1.7, and its database were used to make this life cycle assessment

-  Up to 94% lower CO<sub>2</sub> emissions imprint
-  High percentage of renewable content
-  Recyclable
-  Free from permanent microplastics
-  Food safe
-  Living surface

Changing plastic.  
For good.

## Global warming potential of 3D901 compared to conventional plastic



## Recyclable and Biodegradable

3D901 is biodegradable but can also be recycled or incinerated, giving it many ways to complete the carbon's life cycle at the end of its useful life. Recycling can further reduce the carbon footprint, making it a good choice for companies looking to mark their transition to a circular economy with a reduced environmental footprint.



Compared to conventional plastics, PLA breaks down into carbon dioxide and water over time in the environment, so if it were to end up in nature, it would not leave behind any permanent microplastics.

## A simple transition

3D901 stands out with the living surface that the wood fiber composite provides. It can replace fossil-based plastic in many different tools and applications, which both simplifies and reduces the cost of a transition to bioplastics. Please contact us and we will help your company make the transition.

## Food safety

All raw materials used in the formulation are approved for contact with food according to EU Regulation 10/2011. For more information please contact BIQ Materials and we will be happy to assist with a declaration of conformity.

Changing plastic.  
For good.

**Technical data**

The table below shows a selection of properties for 3D901

| Parameter                         | Value  | Unit               | Method   |
|-----------------------------------|--------|--------------------|----------|
| Density                           | 1.13   | Kg/dm <sup>3</sup> | ISO 1183 |
| Melt flow index (190 °C; 2.16 kg) |        | g/10               | ISO 1133 |
| Melting temperature               | 175    | °C                 | Internal |
| E-module                          | 3000   | MPa                | ISO 527  |
| Charpy impact test (without mark) | 20     | kJ/m <sup>2</sup>  | ISO 179  |
| Proportion of renewable           | 68-98* | %                  | Internal |

raw materials \*Other content consists of non-biobased but biodegradable polymers and processing aids.