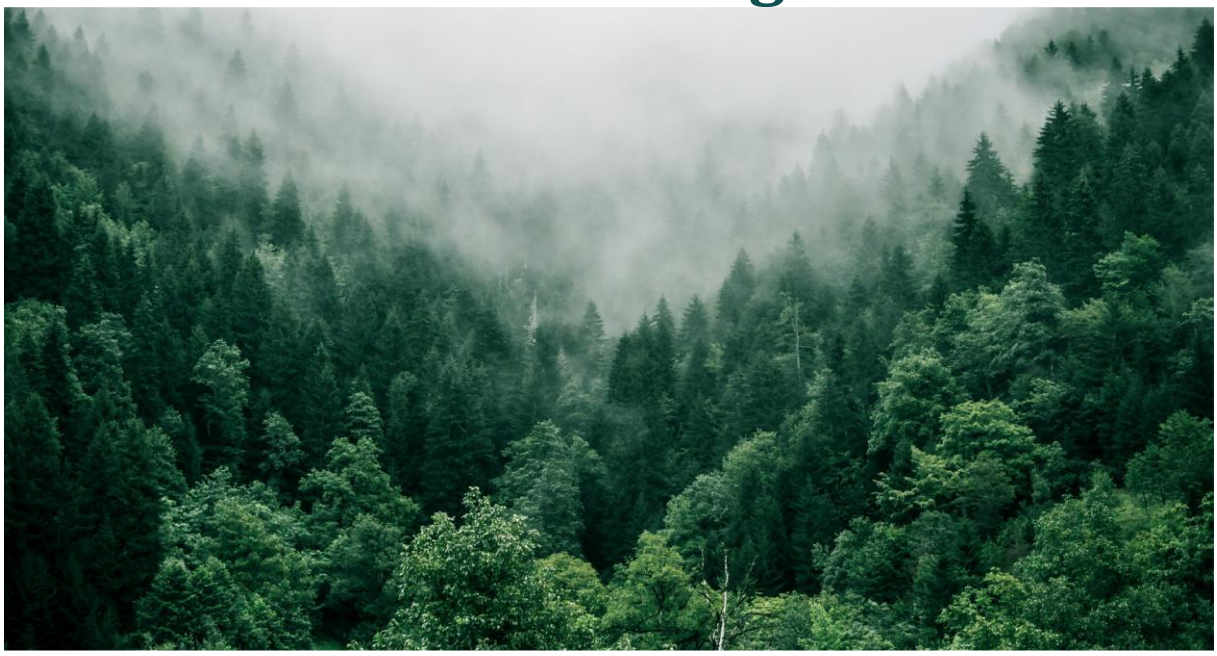
Changing plastic.
For good.

3D901 – Bio composite with Forest Residues for 3D Printing



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

- Up to 94% lower CO2 footprint
- High proportion of renewable content
- Recyclable
- Free from permanent microplastics
- Food safe
- Living surface

Environmental Benefits

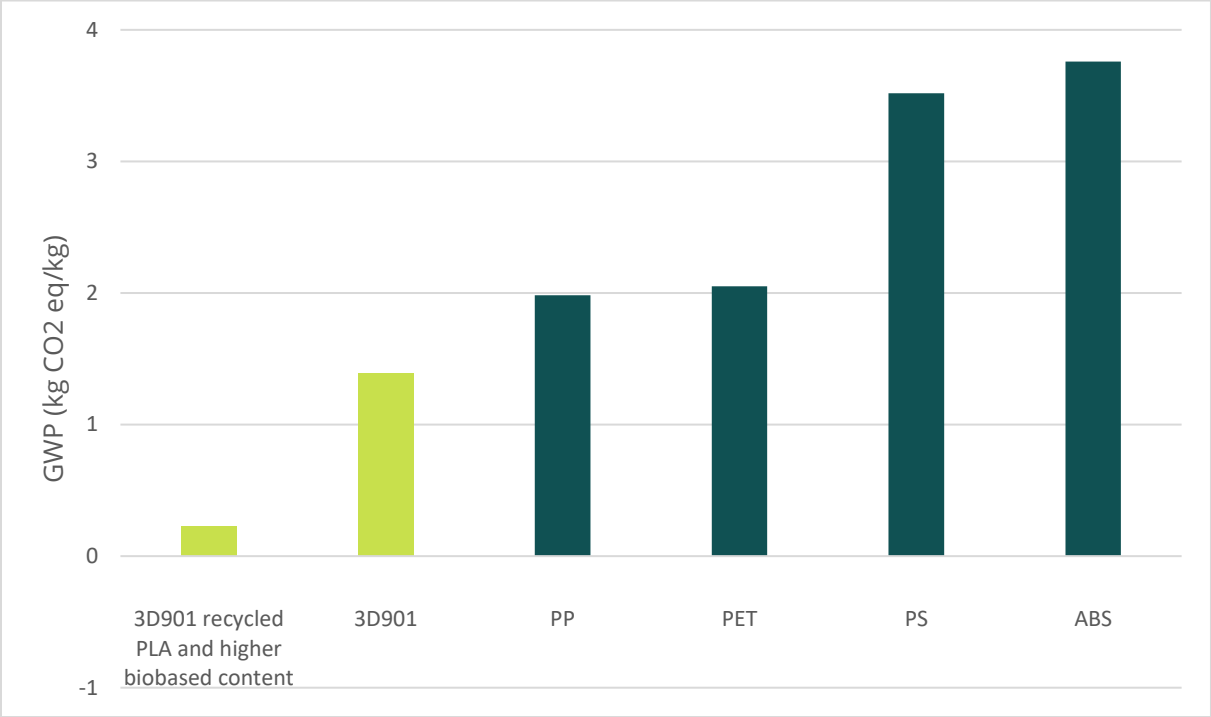
3D901 has been developed to be a sustainable alternative to fossil-based plastic for 3D printing. A high proportion of the raw material comes from renewable sources.

According to life cycle assessment (LCA) calculations, 3D901 has a global warming potential (GWP) of 0.23 kg CO2 eq./kg of manufactured material (including biogenic carbon, cradle-to-gate)* when chemically recycled PLA and a higher proportion of bio-based ingredients are used. This is significantly lower than conventional plastic (see diagram below) and demonstrates how switching to BIQ Materials 3D901 noticeably reduces the CO2 footprint of your company's products. GWP for 3D901 without recycled PLA and with slightly lower renewable content is 1.39 kg CO2 eq./kg of manufactured material (including biogenic carbon).

Feel free to 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 perform this life cycle analysis.

Global Warming Potential for 3D901 Compared to Conventional Plastic



Recyclable and Biodegradable

3D901 is biodegradable but can also be recycled or incinerated, thus having many ways to complete the carbon cycle when its usage period is over. Through recycling, the carbon footprint can be further reduced. In this way, it is a good material choice for companies that want to mark their transition towards a circular economy with a reduced environmental footprint. Compared to conventional plastics, PLA breaks down as carbon dioxide and water over time in the environment. If it ends up in nature, it does not leave any permanent microplastics behind.

An Easy 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 transitioning to bioplastic. Please contact us, and we will help your company make the switch.

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 gladly provide a declaration of compliance.

Technical Data			
The table below shows a selection of properties for 3D901			
Parameter	**Värde**	**Enhet**	**Metod**
Density	1,13	Kg/dm³	ISO 1183
Melt Flow Index (190 °C; 2,16 kg)		g/10	ISO 1133
Melting Temperature	175	°C	Internal
E-modulus	3000	MPa	ISO 527
Charpy Impact Test (unnotched)	20	kJ/m²	ISO 179
Percentage of Renewable Raw Material	68-98*	%	Internal

*The remaining content consists of non-bio-based but biodegradable polymers and processing aids.