

Changing plastic.
For good.

IM121 - Versatile bioplastic for injection molding



IM121 is a bioplastic, based on PLA, suitable for use in a variety of injection molding applications. The formulation is based on a very high proportion of renewable raw materials, which allows a reduction in carbon footprint by up to 105% compared to conventional fossil-based plastics.

Environmental

benefits IM121 has been developed to be a sustainable alternative to fossil-based plastics for injection molding. A very high proportion of the raw material comes from renewable sources.

According to life cycle assessment (LCA) calculations, IM121 has a global warming potential (GWP) of -0.10 kg CO₂ 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 IM121 significantly reduces the CO₂ footprint of your company's products. The GWP for IM121 without recycled PLA and with a slightly lower proportion of renewable content is 0.71 kg CO₂ eq./kg manufactured material (incl. biogenic carbon).

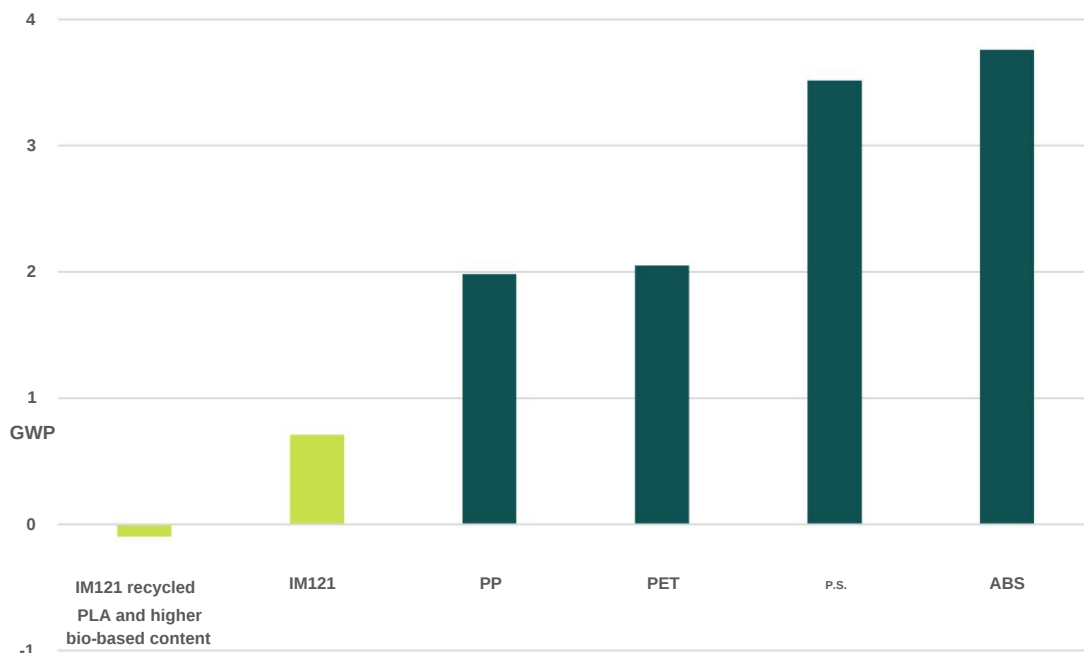
Please contact us so we can discuss how you can improve the environmental profile of your products.

* The CCaLC2 software, version 1.7, and its database were used to perform this life cycle analysis.

- + Up to 105% lower CO₂ emissions imprint
- + Very high percentage of renewable content
- + Recyclable
- + Free from permanent microplastics
- + Food safe

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Global warming potential of IM121 compared to conventional plastic



Recyclable and Biodegradable

IM121 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

IM121 stands out with well-balanced mechanical properties combined with good processability. It can replace fossil-based plastics in many different injection molding tools and applications, which both simplifies and reduces the cost of a transition to bioplastics.

Please contact us and we will help your company to change.

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.

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Technical data

The table below shows a selection of properties for IM121

Parameter	Value	Unit	Method
Paint	Easy to color in	-	-
Density	1.29	Kg/dm ³	ISO 1183
Melt flow index (190 °C; 2.16 kg)	22	g/10	ISO 1133
Melting temperature	175	°C	Internal
E-module	3300	MPa	ISO 527
Charpy impact test (without mark)	40 (complete break)	kJ/m ²	ISO 179
Proportion of renewable	89-99*	%	Internal

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