Changing plastic.
For good.

PE518 – Impact-Resistant and Flame-Retardant Bioplastic for Profile Extrusion

PE518 is a bioplastic based on PLA, suitable for use in a variety of profile extrusion applications where flame retardancy is necessary. The formulation is based on a high proportion of renewable raw materials, which allows for a reduction in carbon footprint by up to 80% compared to conventional fossil-based plastics.

- Up to 80% lower CO2 footprint
- Very high proportion of renewable content
- Flame-retardant
- Recyclable
- Halogen-free
- Impact-resistant

Environmental Benefits

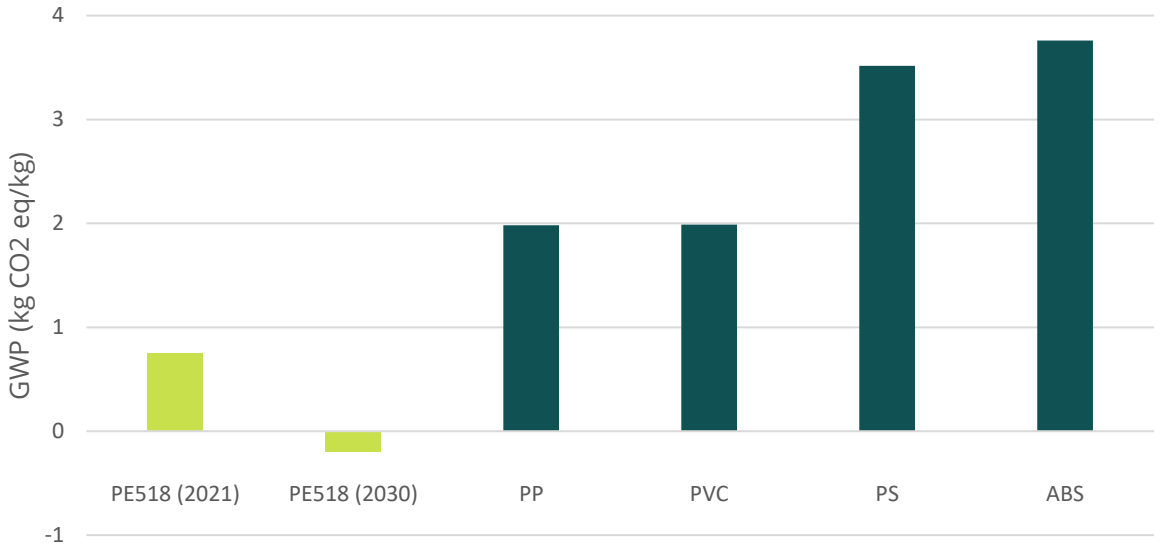
PE518 has been developed to be a sustainable alternative to fossil-based plastic for profile extrusion. A very high proportion of the raw material comes from renewable sources.

According to life cycle assessment calculations (LCA), PE518 has a global warming potential (GWP) of 0.75 kg CO2 eq./kg of manufactured material (cradle-to-gate)*. This is significantly lower than conventional plastic (see diagram below) and shows how switching to BIQ Materials PE518 noticeably reduces the CO2 footprint of your company's products. Our ambition is to continuously reduce the environmental footprint of our materials, with the goal of reducing GWP to -0.20 kg CO2 eq./kg of manufactured material by 2030.

Please contact us to 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 PE518 Compared to Conventional Plastic



Recyclable and Biodegradable

PE518 can also be recycled or incinerated, thus having multiple 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.

An Easy Transition

PE518 stands out with properties such as flame retardancy and very high impact resistance combined with good processability. It can replace fossil-based plastic in many different profile 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.

Technical Data

The table below shows a selection of properties for PE518

Parameter	Value	Unit	Method
Color	Easy to color	-	-
Density	1,38	kg/dm³	ISO 1183
Melt Flow Index (190 °C; 2,16 kg)	4	g/10	ISO 1133
Melting Temperature	155	°C	Internal
E-modulus	2600	MPa	ISO 527
Charpy Impact Test (unnotched)	60 (complete break)	kJ/m²	ISO 179
Glow Wire Test	750	°C	IEC 60695-2-10
Fammability Open Flame	Self-extinguishing	-	Internal
Ball Pressure Test (not annealed)	46	°C	IEC 60695-10-2
Proportion of Renewable Raw Material	87*	%	Internal

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