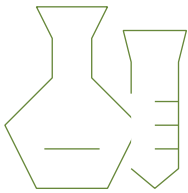




united
biopolymers



BIOPAR® TECHNOLOGY: A SIMPLE AND EFFICIENT WAY TO PRODUCE BIOPLASTICS

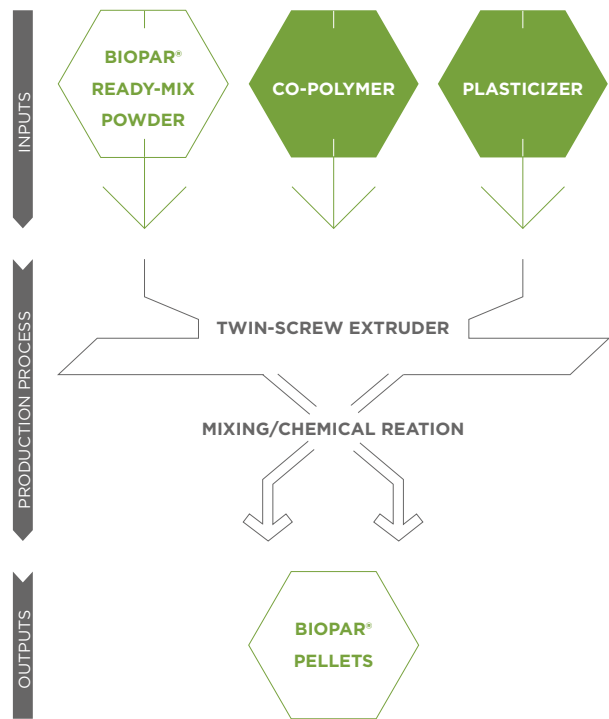
BIOPAR® TECHNOLOGY enables the blending of two or more functional polymers into a unique bi-co-continuous phase structure. It offers several competitive advantages over any of the disperse technologies currently available in the market and allows the production of bio-based and biodegradable plastics, as well as hybrids.

In case of blending starch with a biodegradable co-polymer we call it Guiltfree-Plastics®. This is the next generation of starch-based bioplastics with properties that open-up new applications for

bioplastics. With up to 80% renewable 100% content, 100% recyclability, and biodegradation as an added end-of-life option, they allow consumers to “enjoy plastics guilt-free”.

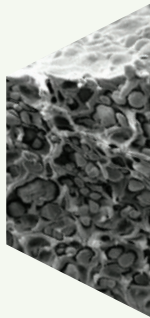
BIOPAR® COMPOUNDING PROCESS

GuiltfreePlastics® are produced, using a twin-screw extruder, in a single production step at processing temperatures of 120-180 degrees Celsius. There is no need for vacuum or any side-feeders.



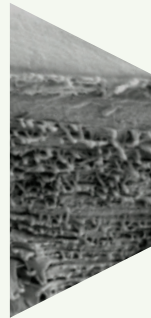
TECHNOLOGY COMPARISON

Today's disperse technologies use starch purely as a filler, which is held in place by the PBAT matrix. The film's cross section shows voids.



TECHNICAL CHARACTERISTICS

- Opaque film
- Low starch loadings (max 27%)
- Decreasing mechanical properties with higher starch loadings
- Low barrier properties due to voids between starch and co-polymer



In contrast, with BIOPAR® Technology starch becomes an integral part, indicated by the bi-co-continuous phase structure.

TECHNICAL CHARACTERISTICS

- Semi-transparent film
- Starch content up to 75%
- High tear resistance and stretchable
- High barrier for oxygen and preservative gases
- Adjustable water vapour transmission
- High water and heat resistance

CONTACT INFO

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