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Compound development based on bio-based plastics

Sustainable materials for your products

Granules from bio-based plastic

Conventional plastics often cannot be replaced by bio-based plastics without formulation or process changes, because either the property profiles are insufficient or the processing parameters have to be adapted to the new materials. With our know-how, we support companies to enter smoothly into the manufacture of products from bio-based plastics.

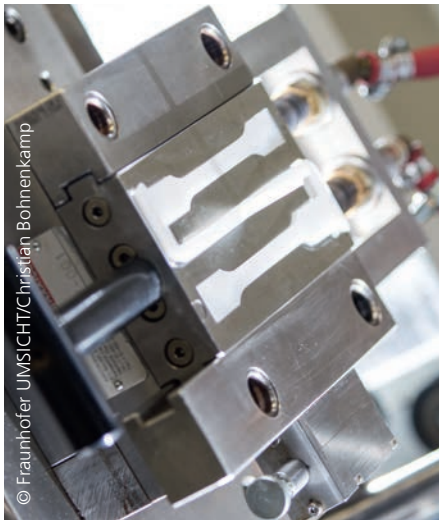
Our vision is to qualify bio-based plastics for your application as well!

We functionalize bio-based plastics, for example by blending, additivation or fiber reinforcement. The focus is on the requirements of the material with regard to application and processing in order to realize production on commercial plastics processing equipment.

We keep an eye on the market and take into account the availability and price development of the raw materials used in our developments. This enables our partners to quickly introduce sustainable products as substitutes or to expand their portfolio.

Industries

- Plastics processing industry
- Packaging industry
- Automotive and supplier industry
- Construction industry
- Consumer and non-durable goods industry
- Machinery and plant manufacturers



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Technological specification

For the development of a bio-based material according to your requirement profile, we have the following equipment at our disposal.

Chemical laboratory
Equipment for polymer modification and production of customized functional additives

Plastics Technology Center
- Measuring kneader/Rolling mill
- Sheet press
- Single screw extruder
- Twin screw extruder (laboratory and industrial scale)
- Flat and blown film lines
- Injection molding machines (1K and 2K)

Analytics
- thermal (DSC, TGA, DMTA)
- mechanical (tensile, compression, flexure test, impact strength)
- rheological (oscillation, rotation, MFI, HKV, extensional viscosity)
- microscopic (digital microscope, confocal microscope, SEM)
- chemical (GPC, NMR, acid & saponification number, surface energies, IR)

Left: Toothbrushes made of bio-based plastics produced by 2K injection molding. Center: Pressure switch; spring holder (white) made of modified polylactic acid. Right: Injection molding machine with tool for standardized tensile test specimens.

Our service

We support you in the implementation of sustainable materials for your plastics applications all the way from the initial idea to the product.

- Consulting and innovation workshops
- Literature, market and patent research
- Customized material development for your application
- Sample quantities from laboratory to industrial scale
- Analysis of processing and material properties
- Bilateral cooperation on a direct contract basis or in publicly funded research projects

Your benefit

You benefit from our many years of know-how in the field of materials development for bio-based plastics as well as from the existing plant technology.

- Competitive edge through innovative materials
- Scientific support for your research and development projects
- Short development times
- Increased visibility
- Support in achieving the SDGs (Sustainable Development Goals) in your company

Keywords

- Materials development
- Plastics processing
- Analytics

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