Renewable • Reusable • recyclable – Bioplastics as part of the circular economy

Bioplastic Conference 2020, Copenhagen
27th of February, 2020
FKuR – plastics as passion

- Solutions for a circular economy
- Latest developments
Medium-sized, private group of companies with the aim of developing, producing and distributing innovative plastics

- Core business are the development and production of biodegradable and biobased plastics, as well as plastic specialties such as TPE
- Customized plastic solutions
- Distribution of biopolymers and specialties
- Co-operation with Fraunhofer UMSICHT, Oberhausen, in the area of strategic material development
FKuR Portfolio and Distribution:

- **Bio-Flex®**
  - PLA-Blends for extrusion and injection molding

- **Biograde**
  - Cellulose Compounds for injection molding

- **Fibrolon**
  - Wood fibre Compounds for extrusion and injection molding

- **Terralene**
  - Tailor-made Green PE Compounds

- **Terraprene**
  - Biobased TPE for extrusion and injection molding

**I’m green™**

- Authorized distribution partner in parts of Europe*, USA and Canada

**Plastic**

- Renewable source Carbon reduction

**Braskem**

- Cooperation with FENC Corp. for their biobased PET

* Austria, Belgium, Denmark, Finland, Germany, Israel, Italy, Luxemburg, Netherlands, Norway, Sweden, Switzerland
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Full service-supplier:

- Technical support
- Marketing support

- Tailor made modifications, e.g. based on I’m green - Polyethylene

- or on basis of Bio-Flex® compositions
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Solutions for a circular economy

Latest developments
Solutions for a circular economy

Infinite Cycle of Bioplastics

Biodegradable and compostable end products
Biodegradable end products
Biowaste bin
Biogas
Biorefinery
Bioplastics granulates
Bioplastics
Agricultural crop
CO₂
Recycling plant
Sorting
Disposal
Energy production
Biobased products
Biobased
Reprocessable
Recyclable
Solutions for a circular economy

Infinite Cycle of Bioplastics

1. Bioplastics granulates
2. Biorefinery
3. CO₂
4. Agricultural crop
5. Biodegradable and compostable end products
6. Biowaste bin
7. Industrial compost plant
8. Biogas
9. Energy production
10. Energy production
11. Recycling plant
12. Sorting
13. Disposal
14. Biobased end products
15. Bioplastics granulates
16. Biobased
17. Recyclable
Solutions for a circular economy

BIOBUDDI – Biobased Building Blocks

- In compliance with food and toy legislations
- > 95% biobased carbon content
- Made in the Netherlands
- Winner of the “Baby Innovation Green Award 2019”
Solutions for a circular economy

dantoy – I’m green®-line

- In compliance with food and toy legislations
- > 95% biobased carbon content
- Manufactured locally in Hobro, Denmark
Solutions for a circular economy

Speick Organic 3.0

- Holistic sustainable packaging concept (mono-material)
- ‘Perfect Product Fit’ (packaging and content complement each other optimally)
- Green PE (Bio-PE) replaces all materials
- No differences in production
Solutions for a circular economy

BE O “Damn Good Plastic Bottle”

- Bottle: Green PE (Bio-PE)
- Sealing: Terraprene® (Bio-TPE)
- Modular, space-saving design
- Favorable carbon footprint
- Fully recyclable
- Winner of the “Green Product Award 2019”
Solutions for a circular economy

Light my fire – MEALKIT™ BIO

- Modular, space-saving design
- Made from durable, natural fibre reinforced material Terralene® WF
- Saving fossil resources
- Favorable carbon footprint
Solutions for a circular economy

Infinite Cycle of Bioplastics

biobased
compostable

Biodegradable and compostable end products
Biowaste bin
Industrial compost plant

Bioplastics granulates
Biorefinery
Biogas

CO₂
Agricultural crop

CO₂

Bioplastics granulates
Biorefinery

Biobased end products
Disposal
Sorting
Recycling plant
Energy production
Solutions for a circular economy

Tree protection made from Bio-Flex®

- Characteristics comparable to fossil polymers used so far
- Product remains stable during the period of use
- Fragmented plastic particles biodegrade over time
- No contamination of the soil by durable plastics
Solutions for a circular economy

Mulch film made from Bio-Flex®

- Certified compostable and biodegradable according to EN 13432 and ASTM D 6400
- Excellent ratio between degradation & performance
- Cost-effective: no collection and disposal costs for film
- Excellent resistance to moisture
- Replacement of herbicides by high weed suppression
Solutions for a circular economy

Organic waste bags made from Bio-Flex®

- Certified compostable and biodegradable according to EN 13432 and ASTM D 6400
- Certified home compostable “OK Compost HOME” by TÜV Austria
- Clean, dry and low-odor collection of organic household waste
- Increase in the quantity and quality of separated bio waste

Picture: FKuR Kunststoff GmbH
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 Solutions for a circular economy

 Latest developments
Latest developments

Terraprene® SI 370 75A

- Oil-free biopolyester based TPE
- Strong bonding with FKuR’s Bio-Flex® S-series
- bio-content > 60%

SUNSTAR
Interbros GmbH
Latest developments

Terralene® rPP 3509

- Terralene® r –series combine biobased and recycled materials
- No share of virgin, fossil based polymers
- 33% renewable PE
- 66% post industrial or post consumer PP
Nature as Guide Line
Plastics as Passion
Customers as Partners

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