Case Histories

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Overview

- Bags, Sacks and Shoppers
- Packaging
- Catering
- Agriculture and Horticulture
- Writing Utensils
- Cosmetics Applications
- Others
Safe Shopping Bags

Bags made from Bio-Flex® F 1130 are flexible and highly extensible (thickness of down to 8 µm). Bags made from Bio-Flex® F 2110 are comparable to PE-HD bags, however, corona treatment is not necessary. Bio colours are available upon demand.
Biodegradable waste bags made from Bio-Flex® have a substantially higher barrier to humidity than other bioplastics. This is due to the fact that Bio-Flex® does not contain starch or starch derivatives.

Organic waste accumulates humidity during collection in the waste bin. With Bio-Flex® this humidity remains inside the bag and does not pass into the bin.
Deep Freeze Packaging

Bags and sacks made from Bio-Flex® F 2110 are comparable to PE-HD bags. Due to the fact that they do not contain starch or starch derivatives, even deep freeze packaging can be realised. Moreover they are translucent and have a desirable surface gloss.
Depending on the performance and the flexibility desired, it is possible to produce padded envelopes and air cushion films from Bio-Flex® F 1130 and F 2110. The specific compression strength is comparable to the strength of conventional air cushions or bubble wrap made from polyethylene.
Net bags are often used for fresh food & vegetable packaging. The important quality factors are high elongation at break, high stretch as well as good printing and welding properties. For the knitted net itself Bio-Flex® F 1130 is used and for the film Bio-Flex® F 2110 was selected.
The unique balance between breathability and vapour barrier is especially important for the production of back sheet film e. g. diapers or other hygiene products.

With films made from polyethylene, the correct finish can only be achieved using an expensive textured surface. This is not necessary with Bio-Flex® F 1130!
Mulch films made from Bio-Flex® F 1130 have the advantage that they do not biodegrade too quickly during their protective life on the surface of the field. However, they do biodegrade steadily once ploughed into the soil after use.

A further advantage is that there are no starch or starch derivatives used, which makes a mulch film made from Bio-Flex® F 1130 less sensitive to humidity, after e.g. variation of weather and making it therefore more durable.
Clamps and fasteners are needed in horticulture to e. g. support plant shoots on a bar. When the plant grows, these clamps tend to fall to the ground and are trodden into the soil accidentally. Due to the unique combination between stiffness and high elasticity, the biodegradable Bio-Flex® F 6510 offers a practical alternative. With Bio-Flex it is even possible to produce active hinges.
Catering Articles

Biograde® C 9550 is the only biodegradable material with mechanical properties comparable to polystyrene and a heat distortion temperature of 117 °C (Vicat A). Moreover, it is possible to process Biograde® C 9550 on conventional injection moulding machines. According to customers’ comments, Biograde® can be processed using ABS tools without problems. The best choice however is to modify the tool for Biograde®.
In collaboration with the research institute Fraunhofer UMSICHT, different writing utensils have been developed. With the “Kolibri“ the companies Ritter-Pen and FKuR have won the award „Bio material of the year 2008“ in December 2008. Another pen producer uses Bio-Flex® F 6510 for the production of a ball-pen in different colours.
Cosmetic products combine the high requirements of aesthetic appearance, such as gloss, scratch resistance and elegant colour, together with technical specifications such as strength, stiffness and resistance to chemicals. Whereas the chemical resistance has to be proven for the respective application, our products Biograde®, Bio-Flex® and Fibrolon® always realise aesthetically appealing requirements.
It is also possible to extrude profiles: The wood filled Fibrolon® F 8530 can be used as a raw material for the production of pencil sleeves.

Fibrolon® P 8540 is used for conventional profile extrusion.
Injection moulded „Tee“s are used in golf sports for the shots on the course. You can push the „Tee“ made from Biograde® C 9550 with a clear conscience deep into the grass. After the successful hit, it will biodegrade there slowly to biomass, CO₂ and water.
To date, many urns are made from metal or conventional plastics. Both materials do not degrade or hardly degrade at all, if they are buried in the earth for many years; often it is necessary to exhume the urn with the contents and dispose of it. Biodegradable urns made from Biograde® C 9550 or Fibrolon® F 8530 offer a natural alternative along with a unique design.
plastics – made by nature!®

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