

# FKUR

*plastics - made by nature!*<sup>®</sup>

## Bio-Flex<sup>®</sup>

biobased – biodegradable – multifaceted



# Bio-Flex<sup>®</sup>

## for home compostable films

The home compostable Bio-Flex<sup>®</sup> grades are suitable for the production of low gauge films which will biodegrade completely in garden compost at low, variable temperatures. All grades have been certified "OK Compost HOME" by the independent testing institute TÜV Austria. Films made from home compostable Bio-Flex<sup>®</sup> grades have outstanding mechanical properties and moisture resistance. The range of possible applications includes multi-purpose bags, as well as bags for fruit and vegetable packaging, mulching films and other packaging.

Type	Minimum Biobased Carbon Content	Tear resistance (MD/TD)	Spencer impact test	Optics
Bio-Flex <sup>®</sup>	[%]	[N/mm]	[N/mm]	
		ASTM D 1922	ASTM D 3420	
F 1801	10 <sup>b</sup>	85/35	570	translucent
F 1804	43 <sup>a</sup>	170/60	550	translucent
F 1814	44 <sup>a</sup>	215/120	340	translucent
FX 1821	10 <sup>b</sup>	100/180	240	opaque
FX 1824	43 <sup>a</sup>	140/300	160	opaque

<sup>a</sup> BCC measured according to ISO 16620. <sup>b</sup> BCC calculated.



BioFlex®

10 Stück

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plastik - made by nature!

# Bio-Flex<sup>®</sup> for industrial compostable film applications

The key feature of the flexible Bio-Flex<sup>®</sup> film grades is the certified compostability. Independent institutes confirm that Bio-Flex<sup>®</sup> passes the strict testing criteria of the EN 13432 standard and is ultimately converted into water, CO<sub>2</sub> and biomass in industrial composting facilities, just as organic waste. The main applications are low gauge bags, magazine envelopes, mulch films and food packaging.

Type	Minimum Biobased Carbon Content	Tear resistance (MD/TD)	Spencer impact test	Optics
Bio-Flex <sup>®</sup>	[%]	[N/mm]	[N/mm]	
		ASTM D 1922	ASTM D 3420	
F 1100	<10 <sup>b</sup>	85/35	570	translucent
F 2110	28 <sup>c</sup>	11/30	680	translucent
FX 1120	50 <sup>c</sup>	12.5/73	240	opaque
FX 1130	10 <sup>b</sup>	110/110	420	opaque
FX 1137	10 <sup>b</sup>	95/150	260	opaque

<sup>b</sup> BCC calculated, <sup>c</sup> BCC measured according to ASTM D6866.



# Bio-Flex<sup>®</sup> for thermoforming applications

Standard bioplastics are often limited due to their low temperature resistance, so that certain applications cannot be realized. The thermoformable Bio-Flex<sup>®</sup> grades are characterized by excellent heat resistance and can be processed on conventional cast film systems. The subsequent thermoforming process can be done both inline and offline. All Bio-Flex<sup>®</sup> thermoforming grades are both biobased and biodegradable.

Type	Minimum Biobased Carbon Content	Tensile strength	Notched impact strength (Charpy)	Vicat A
Bio-Flex <sup>®</sup>	[%]	[N/mm]	[kJ/m <sup>2</sup> ]	[°C]
		ISO 527	ISO 179/1 eA	ISO 306
F 6611	70 <sup>b</sup>	47	7.2	130*
F 6711	70 <sup>b</sup>	44	14	n.a.
S 5630 WH	60 <sup>b</sup>	32	3	105
S 7711	75 <sup>b</sup>	49	5.2	112

\* Dependent upon process parameters. <sup>b</sup> BCC calculated.



# Bio-Flex<sup>®</sup> for injection moulding

The injection molding Bio-Flex<sup>®</sup> grades are characterized by a balance of rigidity and toughness. Products made from Bio-Flex<sup>®</sup> have a pleasant surface touch with a natural shiny color. The main application areas include gardening and landscaping, toys and high-quality cosmetics. But even complex technical parts or thin-walled packaging can be realized with Bio-Flex<sup>®</sup>.

Type	Minimum Biobased Carbon Content	Tensile strength	Notched impact strength (Charpy)	Vicat A	MFR (190 °C/ 2.16 kg)
Bio-Flex <sup>®</sup>	[%]	[N/mm]	[kJ/m <sup>2</sup> ]	[°C]	[g/10 min]
		ISO 527	ISO 179/I eA	ISO 306	ISO 1133
F 6513	70 <sup>b</sup>	46	7.6	130 <sup>a</sup>	7–12
F 6514	70 <sup>b</sup>	43	4	60	17–22
F 9533 WH	85 <sup>b</sup>	50	2.6	63	22–28
S 5630 WH	60 <sup>b</sup>	32	3	105	7–10
S 7514	75 <sup>b</sup>	47	3.5	112	25–30

<sup>a</sup> Dependent upon process parameters. <sup>b</sup> BCC calculated.





**Bio-Flex® are sophisticated and innovative resins that comprise renewability, biodegradability and compostability.**

**Their natural source is e.g. corn, sugar cane or castor oil. Bio-Flex® resins are suitable for numerous flexible applications and can be converted using a wide variety of processing methods.**

**Bio-Flex® resins are drop-in, ready-to-use compounds.**



# FKuR – The Bioplastic Specialist

As a full service provider FKuR  
will give you all the necessary technical support  
and marketing advice to enable you to process  
and sell your products successfully.

We will be happy to assist you in selecting the material  
that will best meet your requirements or provide you with a  
tailor-made formulation.

Get in touch with us to find the perfect solution for your application.

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