

Technical data sheet

Product name: Bio-Flex® F 1804
Date of issue: 23 March 2017

Version: 1.1

Designation of product, preparation and manufacturer

Trade name: Bio-Flex® F 1804

Use of product: Biodegradable and home compostable polymer compound suitable for blown film applications. Certified as home compostable according to EN 13432 (at ambient temperature) with a maximum thickness of 12 µm. The biobased carbon content (BCC) is 43 % (determined according to ISO 16620). Use in applications such as fruit bags.

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Film properties (thickness 23 µm, BUR 2.3)

Tensile modulus MD/TD	240 / 100	[MPa]	ISO 527-3
Tensile strength (yield stress) MD/TD	33 / 36	[MPa]	ISO 527-3
Tensile strain at tensile strength MD/TD	260 / 640	[%]	ISO 527-3
Tensile stress at break MD/TD	33 / 35	[MPa]	ISO 527-3
Tensile strain at break MD/TD	275 / 640	[%]	ISO 527-3
Elmendorf tear resistance MD/TD	170 / 60	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	550	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	1.0 - 3.0	[g/10 min]	ISO 1133
Melt volume rate (190 °C/2.16 kg)	1.1 - 3.2	[cm³/10 min]	ISO 1133
Melting temperature	> 155	[°C]	ISO 3146-C
Density	1.21	[g/cm³]	ISO 1183

Legal notice

The figures should be regarded as guide values only. Under certain conditions the properties can be influenced to a significant extent by the processing conditions.

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Technical data sheet

Product name: Bio-Flex® F 1814
Date of issue: 23 March 2017

Version: 1.1

Designation of product, preparation and manufacturer

Trade name: Bio-Flex® F 1814

Use of product: Biodegradable and home compostable polymer compound suitable for blown film applications. Certified as home compostable according to EN 13432 (at ambient temperature) with a maximum thickness of 12 µm. The biobased carbon content (BCC) is 44 % (determined according to ISO 16620). Use in applications such as fruit bags.

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Film properties (thickness 23 µm, BUR 2.3)

Tensile modulus MD/TD	130 / 230	[MPa]	ISO 527-3
Tensile strength (yield stress) MD/TD	29 / 28	[MPa]	ISO 527-3
Tensile strain at tensile strength MD/TD	595 / 365	[%]	ISO 527-3
Tensile stress at break MD/TD	29 / 28	[MPa]	ISO 527-3
Tensile strain at break MD/TD	600 / 370	[%]	ISO 527-3
Elmendorf tear resistance MD/TD	215 / 120	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	340	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	0.8 - 2.0	[g/10 min]	ISO 1133
Melting temperature	> 155	[°C]	ISO 3146-C
Density	1.25	[g/cm³]	ISO 1183

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Technical data sheet

Product name: Bio-Flex® FX 1803
Date of issue: 19 January 2017

Version: 1.1

Designation of product, preparation and manufacturer

Trade name: Bio-Flex® FX 1803

Use of product: Biodegradable and home compostable polymer compound. Certified as home compostable according to EN 13432 (at ambient temperature) with a maximum thickness of 12 µm. The biobased carbon content (BCC) is 33 % (determined according to ISO 16620). Suitable for blown film applications.

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Film properties (thickness 25 µm, BUR 2.3)

Tensile modulus MD/TD	195 / 95	[MPa]	ISO 527-3
Tensile strength (yield stress) MD/TD	30 / 39	[MPa]	ISO 527-3
Tensile strain at tensile strength MD/TD	385 / 635	[%]	ISO 527-3
Tensile stress at break MD/TD	29 / 39	[MPa]	ISO 527-3
Tensile strain at break MD/TD	390 / 635	[%]	ISO 527-3
Elmendorf tear resistance MD/TD	160 / 40	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	430	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	2.0 - 4.0	[g/10 min]	ISO 1133
Melting temperature	> 155	[°C]	ISO 3146-C
Density	1.22	[g/cm³]	ISO 1183

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Technical data sheet

Product name: Bio-Flex® FX 1821
Date of issue: 10 January 2017

Version: 1.0

Designation of product, preparation and manufacturer

Trade name: Bio-Flex® FX 1821

Use of product: Biodegradable and home compostable polymer compound. Certified as home compostable according to EN 13432 (at ambient temperature) with a maximum thickness of 24 µm. Suitable for blown film applications.

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Film properties (thickness 30 µm, BUR 2.3)

Tensile modulus MD/TD	150 / 110	[MPa]	ISO 527-3
Tensile strength (yield stress) MD/TD	23 / 21	[MPa]	ISO 527-3
Tensile strain at tensile strength MD/TD	500 / 570	[%]	ISO 527-3
Tensile stress at break MD/TD	23 / 21	[MPa]	ISO 527-3
Tensile strain at break MD/TD	500 / 570	[%]	ISO 527-3
Elmendorf tear resistance MD/TD	100 / 180	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	240	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	2.0 - 4.0	[g/10 min]	ISO 1133
Melting temperature	> 155	[°C]	ISO 3146-C
Density	1.38	[g/cm³]	ISO 1183

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Technical data sheet

Product name: Bio-Flex® FX 1823
Date of issue: 19 January 2017

Version: 1.0

Designation of product, preparation and manufacturer

Trade name: Bio-Flex® FX 1823

Use of product: Biodegradable and home compostable polymer compound. Certified as home compostable according to EN 13432 (at ambient temperature) with a maximum thickness of 24 µm. The biobased carbon content (BCC) is 32 % (determined according to ISO 16620). Suitable for blown film applications.

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Film properties (thickness 23 µm)

Tensile modulus MD/TD	180 / 120	[MPa]	ISO 527-5
Tensile strength (yield stress) MD/TD	25 / 19	[MPa]	ISO 527-5
Tensile strain at tensile strength MD/TD	265 / 540	[%]	ISO 527-5
Tensile stress at break MD/TD	24 / 18	[MPa]	ISO 527-5
Tensile strain at break MD/TD	270 / 540	[%]	ISO 527-5
Elmendorf tear resistance MD/TD	110 / 320	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	240	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	2 - 5	[g/10 min]	ISO 1133
Density	1.38	[g/cm³]	ISO 1183

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Technical data sheet

Product name: Bio-Flex® FX 1824
Date of issue: 23 March 2017

Version: 1.1

Designation of product, preparation and manufacturer

Trade name: Bio-Flex® FX 1824

Use of product: Biodegradable and home compostable polymer compound. Certified as home compostable according to EN 13432 (at ambient temperature) with a maximum thickness of 24 µm. The biobased carbon content (BCC) is 43 % (determined according to ISO 16620). Suitable for

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Film properties (thickness 30 µm, BUR 2.3)

Tensile modulus MD/TD	130 / 85	[MPa]	ISO 527-3
Tensile strength (yield stress) MD/TD	21 / 16	[MPa]	ISO 527-3
Tensile strain at tensile strength MD/TD	475 / 580	[%]	ISO 527-3
Tensile stress at break MD/TD	20 / 16	[MPa]	ISO 527-3
Tensile strain at break MD/TD	480 / 580	[%]	ISO 527-3
Elmendorf tear resistance MD/TD	140 / 300	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	160	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	2.0 - 4.0	[g/10 min]	ISO 1133
Melting temperature	> 155	[°C]	ISO 3146-C
Density	1.35	[g/cm³]	ISO 1183

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