



# The Bioplastic Specialist

Technical Properties & Applications



**FKUR**

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

Properties	Density	MFR 190°C / 2.16kg	Tensile Modulus (MD/TD)	Tensile Strength (MD/TD)	Tensile Strain at Break (MD/TD)	Tear Resistance (MD/TD)	Spencer Impact Test	Minimum Biobased Carbon Content	Biode- gradable	Certified Compostable		Translucent	Natural Fibre Reinforced	Food Contact Compliance	Already established in these applications:
Unit	[g/cm <sup>3</sup> ]	[g/10 min]	[MPa]	[MPa]	[%]	[N/mm]	[N/mm]	[%]		Industrial EN 13432	Home EN 13432				
Standard	ISO 1183	ISO 1133	ISO 527	ISO 527	ISO 527	ASTM D1922	ASTM D3420								
<b>Blown Film Extrusion</b>															
Bio-Flex® F 1100	1.25	1.0–4.0	300 / 160	30 / 37	410 / 570	85 / 35	570	<10 <sup>b</sup>	✓	✓		✓		✓	Fruit bags, shopping bags, automatic packaging film, hygienic films
Bio-Flex® F 1801	1.25	1.0–4.0	300 / 160	30 / 37	410 / 570	85 / 35	570	10 <sup>b</sup>	✓	✓ <sup>h</sup>	✓	✓		✓	Fruit bags, shopping bags, automatic packaging film, hygienic films, magazine envelopes
Bio-Flex® F 1804	1.21	1.0–3.0	240 / 100	33 / 36	275 / 640	170 / 60	550	43 <sup>a</sup>	✓	✓	✓	✓		✓	Fruit bags, bread bags, shopping bags, food packaging
Bio-Flex® F 1814	1.25	0.8–2.0	130 / 230	29 / 28	600 / 370	215 / 120	340	44 <sup>a</sup>	✓	✓ <sup>h</sup>	✓	✓		✓	Fruit bags, shopping bags, food packaging
Bio-Flex® F 2104	1.18	1.0–3.5	530 / 150	33 / 30	130 / 445	59 / 29	750	40 <sup>b</sup>	✓	✓		✓		✓	Fruit bags, T-shirt bags
Bio-Flex® F 2110	1.27	3.0–5.0	1130 / 340	49 / 28	220 / 430	11 / 30	680	28 <sup>c</sup>	✓	✓		✓		✓	Shopping & waste bags, nettings, frozen food packaging, automatic packaging film
Bio-Flex® FX 1120	1.34	2.0–4.5	645 / 415	26 / 18	250 / 355	12.5 / 73	240	50 <sup>c</sup>	✓	✓				✓	Shopping bags, waste bags, nettings, food packaging, hygienic films
Bio-Flex® FX 1130	1.39	2.0–5.5	300 / 200	25 / 21	300 / 510	110 / 110	420	10 <sup>b</sup>	✓	✓				✓	Shopping bags, waste bags, nettings, hygienic films, mulch films
Bio-Flex® FX 1137	1.43	3.0–6.0	330 / 185	19 / 15	335 / 485	95 / 150	260	10 <sup>b</sup>	✓	✓				✓	Shopping bags, waste bags, laminates
Bio-Flex® FX 1821	1.38	2.0–5.5	150 / 110	23 / 21	500 / 570	100 / 180	240	10 <sup>b</sup>	✓	✓ <sup>h</sup>	✓			✓	Shopping bags, waste bags, mulch films
Bio-Flex® FX 1824	1.35	2.0–4.0	130 / 85	21 / 16	480 / 580	140 / 300	160	43 <sup>a</sup>	✓	✓ <sup>h</sup>	✓			✓	Shopping bags, waste bags
Properties	Density	MFR 190°C / 2.16kg	Tensile Modulus	Tensile Strength	Tensile Strain at Break	Notched Impact Strength (Charpy)	Vicat A	Minimum Biobased Carbon Content	Biode- gradable	Certified Compostable		Translucent	Natural Fibre Compound	Food Contact Compliance	Already established in these applications:
Unit	[g/cm <sup>3</sup> ]	[g/10 min]	[MPa]	[MPa]	[%]	[kJ/m <sup>2</sup> ]	[°C]	[%]		Industrial EN 13432	Home EN 13432				
Standard	ISO 1183	ISO 1133	ISO 527	ISO 527	ISO 527	ISO 179/1 eA	ISO 306								
<b>Extrusion Blow Molding</b>															
Bio-Flex® F 5710	1.29	2.5–4.5	2125	37	65	30	n.a.	60 <sup>b</sup>	✓	✓				✓	Bottles (up to 1.5 l)
Terralene® HD 3400	0.956	19.0–21.0 <sup>e</sup>	875	27	55	38	n.a.	95 <sup>b</sup>				✓		✓	Bottles, cans
Terralene® PP 3402	0.922	1.0–1.7 <sup>f</sup>	1075	25	175	70	n.a.	33 <sup>b</sup>				✓		✓	Bottles, cans
<b>Injection Molding</b>															
Bio-Flex® F 6513	1.29	7.0–12.0	2600	46	21.5	7.6	130	70 <sup>b</sup>	✓	✓				✓	Toys, cosmetics accessories, technical parts, cutlery, drink stirrers
Bio-Flex® F 6514	1.29	17.0–22.0	2700	43	13	4	60	70 <sup>b</sup>	✓	✓				✓	General purpose, toys, cosmetics accessories, technical parts, mugs, measuring spoons
Bio-Flex® F 9533 WH	1.45	22.0–28.0	4600	50	6.6	2.6	63	85 <sup>b</sup>	✓					✓	Toy figures, garden tools, mugs, pegs
Bio-Flex® S 5630 WH	1.55	7.0–10.0	2160	32	9	3	105	60 <sup>b</sup>	✓					✓	Toys, cosmetics accessories, technical parts, jars, drink stirrers
Bio-Flex® S 7514	1.34	25.0–30.0	3100	47	13	3.5	112	75 <sup>b</sup>	✓					✓	General purpose, technical parts, containers, cutlery, coffee capsules, tooth brushes
Biograde® C 5508	1.27	18.0–28 <sup>g</sup>	2460	55	17	10.5	107	68 <sup>c</sup>	✓			✓		✓	Cases, jars, cutlery, ball pens, markers, lip liner pens, tooth brushes
Biograde® C 5509 CL	1.27	40.0–56.0 <sup>g</sup>	2320	48	15.5	7	100	60 <sup>b</sup>	✓			✓		✓	Transparent & technical parts, jars, containers, lipstick tubes, cosmetic pencils, ball pens
Biograde® C 9550 WH	1.67	11.0–15.0 <sup>g</sup>	4200	41	6.5	2	118	45 <sup>b</sup>	✓	✓				✓	Containers, cutlery, computer accessories
Fibrolon® P 7550	1.03	9.0–14.0 <sup>g</sup>	3250	22	3	3.3	139	30 <sup>b</sup>					✓	✓	Technical covers, containers, cosmetics accessories, sandbox & beach toys
Fibrolon® S 7530	1.27	7.0–12.0 <sup>d</sup>	3850	37	3	3.5	105	75 <sup>b</sup>	✓				✓	✓	Sandbox & beach toys, pegs, tooth brushes, nail files
Terralene® HD 4527	1.07	13.0–15.0	1845	26	16	2.2	n.a.	95 <sup>b</sup>						✓	Toys, jars, caps, containers, lunch boxes
Terralene® PP 3505	0.912	11.0–14.0 <sup>f</sup>	1100	25	95	6	n.a.	33 <sup>b</sup>						✓	Containers, bins
Terralene® PP 3509	0.916	34.0–40.0 <sup>f</sup>	1100	24	13	3.5	122	33 <sup>b</sup>						✓	Caps & closures, containers, bins, lunch boxes
Terralene® WF 3516	1.014	13.0–16.5	1310	23	10	3.1	n.a.	94 <sup>c</sup>					✓	✓	Toys, cosmetics accessories, jars, lids, containers
<b>Sheet Extrusion / Thermoforming</b>															
Bio-Flex® F 6611	1.29	2.0–3.5	2740	47	21.5	7.2	130	70 <sup>b</sup>	✓	✓				✓	Food trays, coffee capsules, cups, coffee cup lids
Bio-Flex® F 6711	1.30	2.0–5.0	2700	44	29	14	n.a.	70 <sup>b</sup>	✓	✓				✓	Food trays, plant labels, flower pots
Bio-Flex® S 5630 WH	1.55	7.0–10.0	2160	32	9	3	105	60 <sup>b</sup>	✓					✓	Food trays, coffee cup lids
Bio-Flex® S 7711	1.36	2.5–6.0	3300	49	24	5.2	112	70 <sup>b</sup>	✓					✓	Coffee cup lids, flower pots
Terralene® PP 4732	1.15	1.2–1.6 <sup>f</sup>	1850	25	100	21	n.a.	33 <sup>b</sup>						✓	Trays, cups, plant labels
<b>Profile Extrusion</b>															
Bio-Flex® F 5710	1.29	2.5–4.5	2125	37	65	30	n.a.	60 <sup>b</sup>	✓	✓				✓	Straws, tubes, tree protections, cotton buds, balloon sticks
Bio-Flex® S 7711	1.36	2.5–6.0	3300	49	24	5.2	112	70 <sup>b</sup>	✓					✓	Hollow profiles, pipes, tubes
Terralene® LL 1712	1.01	1.0–1.8	335	10	>300	59	n.a.	85 <sup>b</sup>						✓	Tubes
Terralene® PP 4732	1.15	1.2–1.6 <sup>g</sup>	1850	25	100	21	n.a.	33 <sup>b</sup>						✓	Edge protection profiles, cable ducts
<b>Extrusion Coating</b>															
Terralene® LL 1303	0.919	2.2–3.0	200	15	480	68	95	75 <sup>c</sup>				✓		✓	Paper coating
<b>3D Printing (FDM) / Monofilaments</b>															
Bio-Flex® 3D Clear	1.25	7.0–13.0	3450	63	10	n.a.	n.a.	90 <sup>b</sup>	✓			✓		✓	Filaments
Bio-Flex® F 7510	1.25	2.0–4.0	3000	55	15	3.5	58	80 <sup>b</sup>	✓					✓	Filaments
Bio-Flex® S 7711	1.36	2.5–6.0	3300	49	24	5.2	112	70 <sup>b</sup>	✓					✓	Filaments
Fibrolon® 3D Wood	n.a.	2.5–4.5	2900	47	6.5	4.4	n.a.	75 <sup>b</sup>	✓				✓	✓	Filaments
Fibrolon® 3D Bamboo	1.19	2.5–5.0	3200	47	7	4.2	n.a.	75 <sup>b</sup>	✓				✓	✓	Filaments
Fibrolon® 3D Cork	n.a.	2.5–5.0	2150	39	18	4.6	n.a.	75 <sup>b</sup>	✓				✓	✓	Filaments

<sup>a</sup> Biobased carbon content measured according to ISO 16620 | <sup>b</sup> Biobased carbon content calculated | <sup>c</sup> Biobased carbon content measured according to ASTM D6866 | <sup>d</sup> MFR measured at 190 °C with 5 kg load | <sup>e</sup> MFR measured at 190 °C with 21.6 kg load | <sup>f</sup> MFR measured at 230 °C and 2.16 kg load | <sup>g</sup> MFR measured at 230 °C and 5 kg load | <sup>h</sup> Certification Industrial Compostable possible on request



## FKuR – The Bioplastic Specialist

We are happy to assist you in selecting the bioplastic that will best meet your requirements or provide you with a tailor-made formulation. As a full service provider, FKuR will give you all the necessary technical support to enable you to process your products optimally. We will be pleased to give you marketing advice on how to complement your marketing message in order to successfully position your product on the market.

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

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