

## Processing advice

**Product name:** Bio-Flex® F 2104

Date of issue: 29 August 2018

Version: 1.0

### Designation of product, preparation and manufacturer

Trade name: Bio-Flex® F 2104

Use of product: Biodegradable compound for blown film extrusion. The biobased carbon content (BCC) is > 40 % (calculated). Used in applications such as fruit bags and T-shirt bags.

Manufacturer: FKuR Kunststoff GmbH  
Siemensring 79  
47 877 Willich  
Germany  
Phone.: + 49 (0) 2154 / 92 51-0  
Fax: + 49 (0) 2154 / 92 51-51  
Mail: info@fkur.com  
Web: www.fkur.com

### Processing conditions for blown film extrusion

Machine equipment: Standard low-density polyethylene screw.

Machine settings:	Feeding Zone	60	[°C]
	Zone 1	160	[°C]
	Zone 2	165	[°C]
	Zone 3	170	[°C]
	Zone 4	175	[°C]
	Adapter	180	[°C]
	Die	180	[°C]
	Mass temperature	max. 190	[°C]
	Die gap	0.8 - 1.4	[mm]
	Die diameter	up to 400 mm	[mm]
	Blow up ratio	2.5 - 4	[-]

General advice: Start at temperatures given above. If gel particles or die lines appear, increase temperature stepwise by 5°C up to a maximum of 190°C melt temperature.

### Purging advice: blown film extrusion

Before production: Ensure that all temperature zones work correctly. Purge the extruder with low melting LDPE, MFR approx. 4 - 6 g/10 min using the above temperature settings. Purging time: approximately 10 - 20 minutes. We recommend to change the screen before production.

During production: Use sufficient cooling for extruder and bubble, a dual lip air ring and/or inner bubble cooling system is preferred with chilled air, as the bubble stability is low when emerging from the die.

After production: Purge the extruder with an LDPE (MFR 0.4 - 2.0 g/10min). Do not allow material to remain hot inside the machine for extended periods as the material will degrade.

### Drying conditions and storage

General: Bio-Flex® is a biodegradable plastic based on PLA and other biopolymers. Moisture content can lead to hydrolysis. Residual moisture content of more than 0.2 % can result in fish eyes and/or pin holes during processing.

Drying: We recommend drying Bio-Flex® at 60°C for a period of 2 - 4 hours.

Storage conditions: If not specified otherwise product life is 6 month after shipment from Sellers warehouse if product is in its original packaging, stored under dry (max. 70% relative humidity) and dark conditions (not exposed to sunlight at a temperature of 5 °C to max. 30°C (ambient temperature)). It is important to observe that a major drop in external air temperature (e.g. during transportation) can result in a development of water condensate. Prior to the processing of the material, it should be ensured that there is no condensate on the packaged product.

Storage conditions for finished products: Finished products made from Bio-Flex® must be stored dry and cold. It is recommended to wrap goods in black PE liners to protect them against moisture and UV radiation. Storage time depends on processing parameters and of climate conditions in the respective area. Because of these essential and complex interacting parameters, FKuR Kunststoff GmbH cannot give any shelf life guarantees for finished products. Please notice that the conditions mentioned above depend on experience of our customers. Each customer should execute individual storage tests according to product specifications and storage requirements.

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### Legal notice

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Brand names:

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