



FC 45140

Technical Data Sheet (TDS)

Date of issue: 01/18/2022 Version: 1.0

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Blow Film Extrusion and coating grade – Compostable Raw Material

SECTION 1: Product Description

FC 45140 is a PLA/PBAT/Starch blend made with Earth Renewable Technologies bio-based package developed for manufacturing blow film extrusion and coating products.

SECTION 2: Physical Properties & Guidelines for use

FC 45140 is supplied beige/white pellets. Temperatures during transportation and storage may not exceed 80°C. Storage time of unopened bags may not surpass 24 months at room temperature. Drying prior to processing is essential. A moisture content less than 100 ppm is recommended to prevent viscosity degradation. The property values listed below should be viewed as guidelines only and may vary based on processing conditions. No warranties of any kind, either expressed or implied are made regarding products described or regarding designs, data or information set forth. Process temperatures must not exceed 230°C.

Drying: dry the material for 4 – 6 hours at 80°C.

Blow film extrusion process

	Settings, °F*	Settings, °C*
Feed Throat	70	21
Feed Section	311-329	155-165
Zone 1	329-347	165-175
Zone 2	329-347	165-175
Zone 3	329-347	165-175
Zone 4	329-347	165-175
Die	347-356	175-180
Screw Speed	40-100ppm	

*These settings are intended as a starting point. Optimization may be required



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Coating process and flat extrusion

	Settings, °F*	Settings, °C*
Feed Throat	70	21
Feed Section	350-375	177-191
Zone 1	375-395	191-200
Zone 2	375-395	191-200
Zone 3	375-395	191-200
Zone 4	375-395	191-200
Die	395-410	200-210
Screw Speed	40-100ppm	

*These settings are intended as a starting point. Optimization may be required

Physical Properties*		
	Test Method	Value
Melt Flow Rate (190°C, 2.16 kg)	ASTM D1238	2.0 g/10 min
Density	ERT-SOP-0500	1.25 g/cm ³
Appearance		Beige

Mechanical Properties*		
	Test Method	Value
Tensile Strength	ERT-SOP-0200	TD: >15MPa MD: >12MPa
Elongation at Break	ERT-SOP-0200	TD: >250 MD: >200
Melting Point	ERT-SOP-0100	165°C

*Data obtained from hot molded ASTM standard film @1mil. Results obtained at 100% add in.

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