

TECHNICAL DATA SHEET

FB1100-C8

Linear Low Density Polyethylene Resin

Overview

FB1100-C8 is a linear low-density polyethylene (LLDPE) octene copolymer designed for the production of a wide variety of industrial and consumer films. Films made from this resin exhibit a combination of excellent toughness and tear resistance, and the product delivers very good processability on conventional LLDPE machinery.

Key Features & Benefits

- Octene (C8) copolymer for excellent toughness and tear resistance
- High dart impact and puncture resistance for heavy-duty applications
- Very good processability on conventional LLDPE blown film lines
- Suitable for use in food-contact applications (see Compliance)

Typical Applications

- Heavy-duty shipping sacks and industrial liners
- Stretch and shrink film blends
- Consumer and agricultural films
- Lamination and general-purpose packaging film

Additive	• Antiblock: No	• Slip: No	• Processing Aid: No	
Physical	Nominal Value (English)		Nominal Value (SI)	Test Method
Density		0.920 g/cm ³	0.920 g/cm ³	ASTM D792
Base Density ¹		0.920 g/cm ³	0.920 g/cm ³	MFR Method
Melt Index(190°C/2.16 kg)		1.0 g/10 min	1.0 g/10 min	ASTM D1238
Films	Nominal Value (English)		Nominal Value (SI)	Test Method
Film Thickness – Tested		1 mil	25 µm	
Film Puncture Energy		47.0 in-lb	5.31 J	MFR Method
Film Puncture Force		14.0 lbf	62.3 N	MFR Method
Film Puncture Resistance		315 ft-lb/in ³	26.1 J/cm ³	MFR Method
FILM TOUGHNESS				ASTM D882
MD		1430 ft-lb/in ³	118 J/cm ³	
TD		1560 ft-lb/in ³	129 J/cm ³	
SECANT MODULUS				ASTM D882
1% Secant, MD		34400 psi	237 MPa	
2% Secant, MD		29800 psi	205 MPa	
1% Secant, TD		39900 psi	275 MPa	
2% Secant, TD		33600 psi	232 MPa	
TENSILE STRENGTH				ASTM D882
MD : Yield		1650 psi	11.3 MPa	

TD : Yield	1730 psi	11.9 MPa	
MD : Break	6870 psi	47.4 MPa	
TD : Break	5890 psi	40.6 MPa	
TENSILE ELONGATION			ASTM D882
MD : Break	600 %	600 %	
TD : Break	740 %	740 %	
Dart Drop Impact	220 g	220 g	ASTM D1709A
ELMENDORF TEAR STRENGTH ²			ASTM D1922
MD	370 g	370 g	
TD	630 g	630 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	223 °F	106 °C	ASTM D1525
Melting Temperature (DSC)	246 °F	119 °C	MFR Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss	60	60	ASTM D2457
Haze	10.0 %	10.0 %	ASTM D1003

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Method B

Extrusion Notes

Fabrication Conditions for Blown Film:

- Screw Size: 3.5 in.; 30:1 L/D
- Screw Type: DSB II
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 418°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 41 rpm
- Frost Line Height: 43 in.

Compliance & Regulations

- U.S. FDA 21 CFR 177.1520 (c) 3.2a – food types I through IX, conditions of use A through H
- Canadian Food and Drug Regulations, Division 23 – Food Packaging Materials
- Regulation (EU) No 10/2011 on plastic materials in contact with food (with limitation)
- Consult the regulations for complete details. Regional regulatory compliance should be verified prior to commercial use.

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