

### Grades

- FPs117-C
- FPs117-D

### Additive Packages

- Polymer process aid
- Slip, antiblock, polymer process aid

### Applications

- Lamination film, coextruded sealant layer, and high toughness film
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## FPs117 Series

**Melt Index** 1.0

**Density** 0.917

### Features

- Easy processability
- Superior toughness with excellent tear strength
- Excellent seal properties
- Low gel

### Common Additives

- Antioxidant

Properties		ASTM <sup>(1)</sup>	Units	Typical Values <sup>(2)</sup> for FPs117-D
<b>Melt Index<sup>(3)</sup></b>		D 1238	g/10 min	1.0
<b>Density</b>		D 792	g/cm <sup>3</sup>	0.917
<b>Film Properties<sup>(4)</sup></b>				
<b>Thickness</b>			<b>µm (mil)</b>	<b>25 (1.0)</b>
<b>Tear Strength</b>	MD	D 1922	g	300
	TD		g	450
<b>Dart Drop Impact, F<sub>50</sub></b>		D 1709/A	g	400
<b>Low Friction Puncture<sup>(5)</sup></b>			J/mm (in/lb/mil)	79 (18)
<b>Tensile Strength</b>	MD	D 882	MPa (psi)	46 (6 670)
	TD		MPa (psi)	42 (6 090)
<b>Yield Strength</b>	MD	D 882	MPa (psi)	9 (1 310)
	TD		MPa (psi)	9 (1 310)
<b>Elongation</b>	MD	D 882	%	540
	TD		%	760
<b>1% Secant Modulus</b>	MD	D 882	MPa (psi)	126 (18 270)
	TD		MPa (psi)	1 32 (19 140)
<b>Haze<sup>(8)</sup></b>	100% LLDPE	D 1003	%	16
	LDPE blended		%	7
<b>Gloss @ 45°<sup>(8)</sup></b>	100% LLDPE	D 2457	--	37
	LDPE blended		--	72
<b>Seal Initiation Temperature<sup>(5,6,7)</sup></b>			°C (°F)	100 (212)

(1) Properties designated have been determined using methods which are in accordance with or substantially in accordance with the specified testing standards.

(2) Typical Values represent average laboratory values and are intended as guides only, not as specifications.

(3) Condition 190/2.16.

(4) Film properties are typical of blown film extruded on a 2.5" extruder with 4" die and 35-mil die gap at a blow up ratio of 2.5:1, but are dependant upon operating conditions.

(5) NOVA Chemicals test method.

(6) Seal initiation temperature is the temperature at which a 2-mil film achieves a seal strength of 4.4N/13mm.

(7) Tested at 0.5s dwell, 0.27 N/mm<sup>2</sup> bar pressure, 305mm/min. pull speed.

(8) Typical values obtained with LLDPE/LDPE blends. Intended as guides only; not to be construed as specifications.

## FPs117 Series-sLLDPE

## SURPASS®

**Availability**

**SURPASS polyethylene resins** are available in bulk hopper cars, hopper trucks, boxes, sea bulk containers or bags. The product type and batch number are clearly marked on each container. Contact the NOVA Chemicals sales office nearest you for availability in your area.

**Storage/Handling**

FPs117 Series should be stored in a clean, dry place at ambient temperatures. Prolonged or improper storage can result in deterioration of product properties. Care should be taken when handling and transferring product to prevent foreign matter contamination. **The NOVA Chemicals Material Safety Data Sheet (MSDS)** contains important safety information and should be reviewed before using the product.

**Processing Conditions****Recommended Conditions:**

<b>Melt Temperature</b>	185°C - 200°C 370°F - 400°F
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<b>Optimum Blow-up Ratio</b>	2:1 - 3:1
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<b>Die Gap</b>	0.9 mm - 2.1 mm 0.035 in - 0.085 in
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<b>Film Thickness</b>	0.5 mil - 3.0 mil 12.7 µm - 76 µm
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Comprehensive assistance with processing conditions and technology is available from NOVA Chemicals Technical Service at (403) 291-8444.

**Food Packaging Status**

**United States:** FPs117-C and FPs117-D complies with the specifications contained in the U.S. Food and Drug Administration (FDA) regulation 21 CFR 177.1520 for olefin polymers, para. (c) 3.2a, and may thus be used in the United States as an article or component of an article intended for use in contact with food, without temperature or food-type restrictions, subject to technical suitability.

**Other Countries:** For regulatory compliance information for other countries, please contact your nearest NOVA Chemicals office.

**Environmental**

NOVA Chemicals' polyethylene resins are biologically and chemically inert, but improper disposal may present an ingestion hazard to wildlife. Where recycling of NOVA Chemicals' polyethylene resins is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended. Please contact NOVA Chemicals Technical Service for further information on recycling and disposal of NOVA Chemicals resins.



**LDPE** is the SPI resin code developed for low density and linear low density polyethylene to identify material type for sorting and recycling purposes.

[www.novachemicals.com](http://www.novachemicals.com)

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