

# Smart™ 121

## Introduction

Smart™ 121, metallocene LLDPE, is an **ethylene-octene copolymer** produced via Nexlene™ technology. Smart™ 121 performs well in a wide range of various food & non-food packaging films with excellent sealing property, impact strength, and processability.

Typical Performance:

- Excellent low seal initiation temperature and hot tack strength
- Superior impact strength and transparency
- Outstanding bubble stability & processability

Compiles with:

- US. FDA 21 CFR 177.1520
- EU. No 10/2011

Additives:

- Antiblock: No
- Slip: No

## Properties

		Typical Values	Unit	Test Method	
<b>Resin Properties</b>	Density	0.912	g/cm <sup>3</sup>	ASTM D792	
	Melt index (2.16 kg @190°C)	1.0	g/10min	ASTM D1238	
	Melting temperature	111	°C	SK Method	
	Vicat softening temperature	100	°C	ASTM D1525	
<b>Film Properties</b>	Film thickness - tested	40	µm	ASTM D374	
	Dart impact strength	>1000	g	ASTM D1709A	
	Haze	8	%	ASTM D1003	
	Seal initiation temperature	101	°C	SK Method <sup>1</sup>	
	Elmendorf tear strength	MD	11	g/µm	ASTM D1922
		TD	23	g/µm	ASTM D1922
	Tensile strength at break	MD	510	kg/cm <sup>2</sup>	ASTM D882
		TD	510	kg/cm <sup>2</sup>	ASTM D882

*Technical Information*

Elongation at break	MD	600	%	ASTM D882
	TD	650	%	ASTM D882
Secant modulus (1%)	MD	1190	kg/cm <sup>2</sup>	ASTM D882
	TD	1300	kg/cm <sup>2</sup>	ASTM D882

<b>Extrusion Condition</b>	<ul style="list-style-type: none"> <li>• Screw size: 35 mm</li> <li>• Die diameter: 100 mm</li> <li>• Die gap: 1 mm</li> <li>• Blow-up ratio: 2.1</li> <li>• Melt temperature: 160-180 °C</li> </ul>
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<sup>1</sup> Temperature at which 0.4 kg/25.4 mm heat seal strength is achieved

**Notes**

These are **typical values** and are **not be construed as specifications**. The physical properties are highly dependent on the manufacturing conditions. So customers should confirm performances by their own tests.

*For additional sales, order and technical assistance*

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