

Technical Information

Smart™ 121S

Introduction

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

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: 2000 ppm
- Slip: 1000 ppm

Properties

		Typical Values	Unit	Test Method	
Resin Properties	Density	0.913	g/cm ³	ASTM D792	
	Melt index (2.16 kg @190°C)	1.0	g/10min	ASTM D1238	
	Melting temperature	111	°C	SK Method	
	Vicat softening temperature	101	°C	ASTM D1525	
Film Properties	Film thickness - tested	40	µm	ASTM D374	
	Dart impact strength	>1000	g	ASTM D1709A	
	Haze	10	%	ASTM D1003	
	Seal initiation temperature	101	°C	SK Method ¹	
	Elmendorf tear strength	MD	11	g/µm	ASTM D1922
		TD	23	g/µm	ASTM D1922
	Tensile strength at break	MD	500	kg/cm ²	ASTM D882
		TD	510	kg/cm ²	ASTM D882

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Elongation at break	MD	580	%	ASTM D882
	TD	650	%	ASTM D882
Secant modulus (1%)	MD	1200	kg/cm ²	ASTM D882
	TD	1330	kg/cm ²	ASTM D882

- Extrusion Condition**
- Screw size: 35 mm
 - Die diameter: 100 mm
 - Die gap: 1 mm
 - Blow-up ratio: 2.1
 - Melt temperature: 160-180 °C

¹ 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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