

## High Density Polyethylene SGM9450F

### Description:

SGM9450F is a high-density polyethylene, developed for the high molecular weight film extrusion segment produced with bimodal technology. The film produced from this resin has high tenacity and excellent resistance to impact characteristics. This resin has wide molar mass distribution that makes it easier to process.

The minimum biobased content of this grade is 96%, determined according to ASTM D6866.

### Application:

Bags in general (like T-shirt bags, Handle Bags, Star Bags, others);  
Geomembranes.

### Process:

Blown Film Extrusion

### Control Properties:

	ASTM Method	Units	Values
Melt Flow Rate (190/5)	D 1238	g/10 min	0.33
Melt Flow Rate (190/21.6)	D 1238	g/10 min	9.3
Density	D 792	g/cm <sup>3</sup>	0.952

### Typical Properties:

Blown Film Properties<sup>a</sup>

	ASTM Methods	Units	Values
Tensile Strength at Break (MD/TD)	D 882	MPa	85/45
Elongation at Break (MD/TD)	D 882	%	590/740
Tensile Strength at Yield (MD/TD)	D 882	MPa	40/30
Dart Drop Impact	D 1709	g/F50	245
Elmendorf Tear Strength (MD/TD)	D 1922	gF	58/51
Puncture Strength	Braskem Method	J/m	80
Sealing Initial Temperature	Braskem Method	°C	125

(a) Film with 12,5 microns produce in a 75mm extruder with 1,3 mm of die gap and a blow-up ratio of 4.5:1. (MD = extrusion direction and TD = transversal direction).

