

## 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).

### Final Remarks:

1. This resin meets the requirements for olefin polymers as defined in 21 CFR, section 177.1520 issued by FDA – Food and Drug Administration in force on the date of publication of this specification. The additives present are covered in appropriate regulation by FDA
2. The information presented in this Data Sheet reflects typical values obtained in our laboratories, but should not be considered as absolute or as warranted values. Only the properties and values mentioned on the Certificate of Quality are considered as guarantee of the product.
3. In some applications, Braskem has developed tailor-made resins to reach specific requirements.
4. In case of doubt regarding utilization, or for other applications, please contact our Technical Assistance.
5. For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS Registry number: 25087-34-7.
6. The mentioned values in this report can be changed at any moment without Braskem previous communication.
7. Unless specified, Braskem does not recommend the use of this grade for the fabrication of packages, parts or any other type of product designed to medical and/or pharmaceutical applications.
8. The content of this Data Sheet replaces previous revisions published for this product.
9. This resin does not contain the substance Bisphenol A (BPA, CAS # No. 80-05-7) in its composition.