

# SABIC® HDPE FI0851P

HIGH DENSITY POLYETHYLENE

## DESCRIPTION

HDPE FI0851P is a high molecular weight high density polyethylene resin designed for blown film applications. This resin has broad molecular weight distribution that makes it easier to process. Films made from this resin exhibit high stiffness, excellent impact and toughness characteristics.

## TYPICAL PROPERTY VALUES

Revision 20230421

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190 °C and 21 kg	8	dg/min	ASTM D1238
at 190 °C and 2.16 kg	0.05	dg/min	ASTM D1238
<b>Density</b>			
Density	0.951	g/cm <sup>3</sup>	ASTM D792
<b>MECHANICAL PROPERTIES</b>			
<b>Tensile test <sup>(1)</sup></b>			
stress strength @ yield, MD	35	MPa	ASTM D882
stress strength @ yield, TD	30	MPa	ASTM D882
stress strength @ Break, MD	50	MPa	ASTM D882
stress strength @ Break, TD	48	MPa	ASTM D882
stress Elongation @ Break, MD	490	%	ASTM D882
stress Elongation @ Break, TD	500	%	ASTM D882
Elmendorf Tear Strength, MD	17	gf	ASTM D1922
Elmendorf Tear Strength, TD	30	gf	ASTM D1922
Dart Drop Impact	340	g	ASTM D1709
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature <sup>(2)</sup></b>			
Vicat Softening Temperature	126	°C	ASTM D1525

(1) Blown film processing conditions: Extruder Ø50 mm, Die Ø120 mm, Die lip gap 1.35 mm, Temperature 200 °C, Output rate 50 kg/h, BUR 4.0, Film thickness 20 µm, Neck height 840 mm

(2) Typical Properties only and are not to be construed as specification

## APPLICATIONS

- Shopping bag
- Garbage bag
- Industrial liner

## PROCESSING CONDITIONS

Typical processing conditions for FI0851P are:

Melt temperature: 250°C

Mold temperature: 15-60°C

Injection pressure: 600 - 1000 Bar



## STORAGE AND HANDLING

Polyethylene material should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.

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