

POLYFIL F700

Description

POLYFIL F700 is a high-performance polyethylene compound specifically formulated for high-density polyethylene (HDPE) blown film applications. This grade is engineered to deliver superior mechanical properties, excellent film uniformity, and reliable processability, even in ultra-thin film applications. It is highly recommended for producing films with thicknesses in the range of 10–25 microns, making it suitable for a wide range of packaging and consumer products such as shopping bags, T-shirt bags, garbage bags, liner bags, and food-contact films.

Properties	Test method	Unit	Typical Value
MFI (190° C / 5 kg)	ISO 1133	g/10min	0.19±0.1
Density	ISO 1183	kg/m ³	0.952±0.003
Moisture Content	ASTM D6980-17	ppm	≤1500
Melting point	ASTM D 2117	° C	135±5
Vicat Softening Point	ASTM D1525	° C	124
Tensile Strength @ Yield (MD*)	ASTM D638	MPa	24
Tensile Strength @ Yield (MD, TD)	ASTM D638	MPa	30, 60
Elongation @ Break (MD, TD)	ASTM D638	%	450, 240
ESCR (IGEPAL 10%) (F50, 50° C)	ASTM D1693	HR	> 1000

*MD = Machine Direction, *TD = Transverse Direction

Advantage

- High tensile strength with excellent dart impact resistance
- Low gel content for smooth, defect-free films
- Good moisture barrier and enhanced ultra-thin film capability
- Food contact compliant — suitable for hygienic and food packaging uses
- High stiffness ensuring good dimensional stability
- Wide service temperature range and UV resistance for outdoor durability
- Good impact resistance and excellent processability on standard HDPE film lines

Processing Guidelines

Processing parameters may vary depending on machine configuration, die size, and target film thickness. The following conditions are recommended as a starting point:

- Melt Temperature: 190–210 °C
- Blow-Up Ratio (BUR): 3–5
- Frost Line Height (FLH): 8–10 × die diameter

Packaging

POLYFIL F700 is supplied in powder form packed in 25 kg bags.

Storage and handling

POLYFIL F700 should be stored to prevent direct sunlight and/or heat exposure. The storage area should also be dry and preferably not exceed 50°C; Bad storage conditions may lead to quality deterioration and product performance. It is advisable to process **POLYFIL F700** within 12 months after delivery.

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