POLYCHEM
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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	-	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

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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.