PETRODUCT
Petrochemical trading Co.

Product Data Sheet

HFI 5110

High Density Polyethylene

Product Description

HFI 5110 is a high molecular weight, high-density polyethylene with broad molecular weight distribution and 1-hexene as a co-monomer, specially developed for producing thin films with excellent strength and rigidity. This product is suitable for manufacturing of high strength grocery sacks, shopping bags and high quality thin films for uni/multi-wall packaging. Films produced with this grade can be readily treated and printed to give high quality graphics. HFI 5110 has been manufactured under Basell license.

General Information

Status	Commercial: Active	
Application	Blown film extrusion- Uni/multi wall packaging- High quality thin films- Shopping bags High strength grocery s	
Form(s)	Pellet	
Attribute	High tear resistance High melt stability	High quality graphic printing
Additives	Antioxidant: Yes Zinc Stearate: Yes	Antiblock: No Slip Agent: No

Typical Properties	Typical Value [1]	Unit	Test Method
Physical			
High Load Melt Flow Index (190°C/ 21.6 kg)	10	g/10 min	ISO 1133
Density [2]	0.951	g/cm^3	ISO 1183
Mechanical [3]			
Tensile Modulus of Elasticity	1050	MPa	ISO 527-1,2
Tensile Strength (MD)	55	MPa	ISO 527-1,3
Tensile Strength (TD)	55	MPa	ISO 527-1,3
Tensile Strain at Break (MD)	580	%	ISO 527-1,3
Tensile Strain at Break (TD)	620	%	ISO 527-1,3
Tensile Stress at Yield	26	MPa	ISO 527-1,3
Tensile Strain at Yield	10	%	ISO 527-1,3
Elmendorf Tear Strength (MD)	250	mN	ISO 6383-2
Elmendorf Tear Strength (TD)	800	mN	ISO 6383-2

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Thermal			
Melting Temperature	132	°C	**ISO 3146**
Vicat Softening Temperature (Method A/10N)	127	°C	**ISO 306**

Recommended Process Conditions 4	
Extruder temperature profile: 200-235 °C	Blow up ratio: 3-5

Film thickness: 15-50 µm

1. Typical values: these are not to be construed as specifications.
2. The density parameter was determined on compression-molded specimens, which were prepared in accordance with procedure C of ASTM D4703, Annex A1.
3. Properties are based on 20 µm blown film produced at a melt temperature of 220°C and 3 BUR using 100% HFI5110 resin. Modulus property is based on compression-molded specimens, which were prepared in accordance with procedure B of ASTM D4703, Annex A1.
4. Please note that, these processing conditions are recommended by manufacturer only for 100% HFI5110 resin (not in the case of blending with any other compatible material), therefore because of the many particular factors which are outside our current knowledge and control and may affect the use of product, no warranty is given for the foregoing data. Moreover, the specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.