DATE: 2024-2025
Arena Code: AS10362/ASPC-HFI 5110

Technical Data Sheet

HFI 5110

High Density Polyethylene

HFI5110 is a high molecular weight, high-density polyethylene with broad molecular weight distribution specially developed for producing thin films with excellent strength and rigidity. This product is suitable for manufacture 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. HFI5110 has been manufactured under Basell license.

Applications:

Automotive fuBlown film extrusion, uni/multi wall packaging, high quality thin films, shopping bags, high strength grocery sacks.

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Arena Petro Gas

Producer and Supplier in the fields of Chemical ,Oil ,Gas and Petrochemical industries

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Typical Properties	Typical Value[1]	Units	Test Method
High Load Melt Flow Index(190℃/21.6kg)	10	g/10 min	ISO 1133
Density[2]	0.951	gr/cm3	ISO 1183
Mechanical[3]			
Tensile Modulus of Elasticity	1050	MPa	ISO527-1;2
Tensile Strength (MD)	55	MPa	ISO527-1;3
Tensile Strength(TD)	55	MPa	ISO527-1;3
Tensile Strain at Break (MD)	580	%	ISO527-1;3
Tensile Strain at Break (TD)	620	%	ISO527-1;3
Tensile Stress at Yield	26	MPa	ISO527-1;3
Tensile Strain at Yield	10	%	ISO527-1;3
Elmendorf Tear Strength (MD)	250	mN	ISO 6383-2
Elmendorf Tear Strength (TD)	800	mN	ISO 6383-2
Thermal Properties			
Melting Temperature	132	°C	ISO 3146
Vicat Softening Temperature (Method A/ 10N)	127	°C	ISO 306
Recommended Process Conditions[4]			
Extruder Barrel Temperature: 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 4 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.

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