



HFI 5110

HDPE

Data Sheet

HFI 5110 is a high molecular weight, high density polyethylene, which has a broad molecular weight distribution and high melt strength. This product specially designed for producing thin films with excellent strength and rigidity.

HFI 5110			
Property	Test Method	Unit	Typical Value
Physical Properties			
Density (23 °C)	ISO 1183	kg/cm ³	951
MFI (190 °C /21.6Kg)	ISO 1133	dg/min	10
Mechanical properties			
Tensile Modulus of elasticity	ISO527-1;2	MPa	1050
Tensile Strength (MD)	ISO 527-1;3	MPa	55
Tensile Strength (TD)	ISO 527-1;3	MPa	55
Tensile Strain at Break (MD)	ISO 527	%	580
Tensile Strain at Break (TD)	ISO 527	%	620
Tensile stress at Yield	ISO 527	MPa	26
Tensile strain at Yield	ISO 527	%	10
Elemendorf tear strength(MD)	ISO 6383	mN	250
Elemendorf tear strength(TD)	ISO 6383	mN	800
Thermal Properties			
Melting Point	ISO 3146	oC	132
Vicat Temperature,(A50,50 °C/h ,10 N)	ISO 306	oC	127
Additives :Antioxidant –Heat stabilizer Zinc Stearate			



Notes:

- (1) Typical Values: not to be construed as specifications limits.
- (2) Properties are based on 20 μm blown film produced at a melt temperature of 220°C and 4 BUR using 100% HFI5110.

➤ APPLICATION

- HFI5110 is recommended for blown film extrusion. 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 product can be readily treated and printed to give high quality graphics.

➤ Licensor

- HFI5110 has been manufactured using Basell Lupotech G licensed technology.

➤ Processing Conditions

Extruder temperature profile: 200-235°C Frost line height: 6-8 times die diameter. Blow Up Ratio: 3-5

Recommended film thickness: 15 to 50 μm

Please note that, these processing conditions are recommended by producer only for 100% HFI5110 resin (not in the case of blending with any other compatible material), but because of the many particular factors which are outside our knowledge and control, and may affect the use of product, no warranty is given.

➤ Packaging

Supplied in pellet form and can be packaged in 25kg Bags, one ton semi bulk or 17 tons bulk containers.



➤ **Food Packaging**

The above mentioned grade meets the relevant requirements of plastics directive 2002/72/EC (06-08-2002) and its amendments till directive 2008/39EC relating to plastic materials and articles intended to come into contact with foodstuffs.

➤ **Pharmaceutical application**

The above mentioned grade meets the requirements of the European pharmacopeia version 6 section 3.1.5 for pharmaceutical application.

➤ **Handling**

Minimal protection to prevent possible mechanical or thermal injury to the eyes is required. Fabrication areas should be ventilated to carry away fumes or vapors.

➤ **Conveying**

Conveying equipment should be designed to prevent accumulation of fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used:

1. Be equipped with adequate filters.
2. Is operated and maintained in such a manner to ensure no leaks develop.
3. That adequate grounding exists at all times.

We further recommend that good housekeeping will practiced throughout the facility.



➤ **Storage**

All resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust free and the ambient temperature should not exceed 50°C. It is also advisable to process polyethylene resins (in pelletized or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality. We would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance.

➤ **Compatibility**

Polyethylene resins will burn when supplied adequate heat and oxygen. They should be handled and stored away from contact with direct flames and/or other ignition sources. In burning; polyethylene resins contribute high heat and may generate a dense black smoke. Fires can be extinguished by conventional means with water and mist preferred. In enclosed areas, fire fighters should be provided with self-contained breathing apparatus.

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ONLINE on WhatsApp, Wechat, Telegram

+989123214280



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Sales@Datis-inc.com



WWW.DATIS-INC.COM

SALES@DATIS-INC.COM

Tel: +98-21-460-92320

WhatsApp/Wechat: +989123214280