

Linear Low Density Polyethylene HF3712

Description:

The resin HF3712 is a polyethylene suited for geomembranes production. Due to its high molecular weight this product has an excellent balance of mechanical properties, stress crack resistance (ESCR) and processability.

Application:

Geomembranes.

Processing Conditions:

It is recommended to use a temperature profile from 190 – 230°C, therefore the processing conditions must be optimized according to the equipment used.

Control Properties:

	ASTM Methods	Unit	Values
Melt Flow Rate (190°C/5.0kg)	D 1238	g/10 min	0.38
Melt Flow Rate (190°C/21.6kg)	D 1238	g/10 min	10.5
Density	D 1505	g/cm ³	0.937

Typical Properties:

Reference Properties

	ASTM Methods	Unit	Values
Deflection Temperature under Load @0.455 MPa	D 648	°C	54
Vicat Softening Temperature @10 N	D 1525	°C	118
Tensile Strength at Yield ^a	D 638	MPa	19
Tensile Strength at Break ^a	D 638	MPa	30
Elongation at Yield ^a	D 638	%	12
Elongation at Break ^a	D 638	%	1400
Shore D Hardness ^c	D 2240	-	56
Notched Izod Impact Strength @23°C ^b	D 256	J/m	NB
Flexural Modulus – 1% Secant ^b	D 790	MPa	682
Environmental Stress Cracking Resistance ^d	D 1693	h/F50	>1500
Environmental Stress Cracking Resistance ^e (SP-NCTL)	D 5397	h	>900
OIT	D 3895	min	>100

NB = No Break. Test specimens obtained by compression mold according to ASTM D 4703. Plaque Thickness: a) 2mm. b) 3mm. c) 6mm. d) 2mm with 0.3 mm notch at 50°C. e) 2mm at 50°C.

Final Remarks:

- Accordingly to ASTM terminology, it is a Medium Density Polyethylene (MDPE). Under Mercosur Common Nomenclature (NCM) fiscal definition, this resin is a Linear Low Density Polyethylene (LLDPE).
- These information reflect typical values obtained in our laboratories, but should not be considered as absolute or as warranted values. Only the properties and values mentioned on the Certificate of Quality are considered as guarantee of the product.
- In some applications, Braskem has developed tailor-made resins to reach specific requirements.
- In case of doubt regarding utilization, or for other applications, please contact our Application Engineering.
- For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS Registry number: 25213-02-9.
- The mentioned values in this report can be changed at any moment without Braskem previous communication.
- Braskem does not recommend this grade for packages, parts or any kind of product manufacture that will be used for storage or contact with solution that will have internal contact with human body.
- The content of this Data Sheet replaces previous revisions published for this product.
- This resin does not contain the substance Bisphenol A (BPA, CAS # No. 80-05-7) in its composition.