

## Linear Low Density Polyethylene HF3712

### Description:

The HF3712 resin is a Linear Low Density Polyethylene indicated for the production of geomembranes. It shows excellent resistance to environmental stress cracking (ESCR), good processability and melt strength.

### Additive:

Lubricant – Antioxidant.

### Application:

Geomembranes.

### Recommended Processing Conditions:

The HF3712 resin should be processed on specific extruders. The optimum processing conditions will vary according to the type of equipment used, but the best results are obtained at a melt temperature within the range of 175 to 195°C.

### Control Properties:

	ASTM Methods	Units	Values
Melt Flow Rate (190/21.6Kg)	D 1238	g/10 min	10.5
Density	D 1505	g/cm <sup>3</sup>	0.937

### Typical Properties:

Plaque Properties<sup>a</sup>

	ASTM Methods	Units	Values
Tensile Strength at Yield	D 638	MPa	19
Elongation at yield	D 638	%	12
Tensile Strength at Break	D 638	MPa	28
Elongation at Break	D 638	%	1289
Tensile Modulus – 1% Secant	D 790	MPa	682
Shore D Hardness	D 2240	-	56
Izod Impact Strength 23°C	D 256	J/m	735
Vicat Softening Temperature at 50 N	D 1525	°C	62
Deflection Temperature under Load at 0.455 MPa	D 648	°C	54
Environmental Stress Cracking Resistance <sup>b</sup>	D 1693	h/F50	>1500
ESCR SP-NCTL	D 5397	Hours	>900

(a) Test specimens prepared from compression molded sheet made according to ASTM D 4703.

(b) Compression molded 2 mm thickness, 0.3 mm notched-plaques. 10% Igepal. 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.