

Marlex® TRB-115 Polyethylene

HIGH DENSITY POLYETHYLENE (HDPE)

This bimodal high molecular weight, high density polyethylene (HMW-HDPE) ethylene-hexene copolymer is tailored for blown film applications that require:

- Good bubble stability and film drawdown
- High impact strength and toughness
- Excellent stiffness and tensile strength
- Balanced tear strength

Typical blown film applications include:

- T-shirt bags
- Produce bags
- Merchandise bags
- Industrial liners
- Trash can liners

This resin meets these specifications:

- FDA 21 CFR 177.1520(c) 3.2a. The resin may be used in contact with all types of food as defined in Table 1, 21 CFR 176.170(c) and at use conditions B-H as defined in Table 2, 21 CFR 176.170(c).

Nominal Resin Properties	English	SI	Method
Melt Index, 190 °C/2.16 kg	---	0.06 g/10 min	ASTM D1238
HLMI, 190 °C/21.6 kg	---	9.5 g/10 min	ASTM D1238
Density	---	0.950 g/cm ³	ASTM D1505

Nominal Blown Film Properties at 0.5 mil ¹	English	SI	Method
Dart	260 g/mil	100 N/mm	ASTM D1709
Elmendorf Tear MD	15 g/mil	6 N/mm	ASTM D1922
Elmendorf Tear TD	450 g/mil	174 N/mm	ASTM D1922
Tensile Strength at Break MD	13,000 psi	90 MPa	ASTM D882
Tensile Strength at Break TD	6,000 psi	41 MPa	ASTM D882
Tensile Elongation at Break MD	260 %	260 %	ASTM D882
Tensile Elongation at Break TD	570 %	570 %	ASTM D882
1 % Secant Modulus MD	120,000 psi	827 MPa	ASTM D882
1 % Secant Modulus TD	140,000 psi	965 MPa	ASTM D882

1. 0.5 mil (12.7 micron) film produced using a grooved-feed extruder at a rate of 225 lb/h with a stalk height of 7 x Die Diameter, a 4:1 Blow-Up Ratio (BUR), a 6 inch die diameter and a 0.040 inch die gap. The nominal properties reported herein are representative of the product under these processing conditions, although film properties can vary depending on the specific film-blowing conditions. Therefore, the data should not be used for specification purposes.

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