*Petrothene*

# GA503

Linear Low Density Polyethylene
Film Extrusion Grade
Melt Index: 3.5    Density: 0.925

**lyondellbasell**

**Applications**

GA503 is a medium density butene copolymer LLDPE resin with high draw.  GA503 is typically selected by customers for stiff, thin blown films. GA503 contains an additive package to minimize discoloration and die build-up.

**Regulatory Status**

GA503 series resins meet the requirements of the Food and Drug Administration 21 CFR 177.1520.  This regulation allows the use of this olefin polymer in" …articles or components of articles intended for use in contact with food..."  Specific limitations or conditions of use may apply. Contact your Equistar product safety representative for more information.

**Processing Techniques**

GA503 provides high output at low melt temperatures and without high pressure, high torque or shear-induced melt fracture. For improved drawdown without bubble breaks, GA503 can be blended with LDPE. It can also be blended with high performance LLDPE grades to reduce torque and horsepower requirements. Specific recommendations for type of resin and extrusion conditions can be made only when the end use, required properties and processing equipment are known.

**Typical Properties**

| Property* | Nominal Value | | Units | ASTM Test Method |
|---|---|---|---|---|
| Melt Index | 3.5 | | g/10 min | D1238 |
| Density | 0.925 | | g/cc | D1505 |
| **Film Thickness** | **0.5** | **1.5** | **mil** | |
| Haze | 25 | 30 | % | D1003 |
| Gloss | 60 | 25 | | D2457 |
| Tensile Strength @ Break, MD (TD) | 1,400 (1,050) | 4,800 (3,400) | psi | D882 |
| Elongation @ Break, MD (TD) | 500 (630) | 690 (740) | % | D882 |
| 1% Secant Modulus, MD (TD) | 36,600 (37,000) | 44,500 (45,500) | psi | D882 |
| Elmendorf Tear Strength, MD (TD) | 40 (180) | 100 (215) | g | D1922 |
| Dart Drop Impact Strength, $F_{50}$[1] | 30 | 110 | g | D1709 |

\*  Testing was performed on film produced at a 2.5:1 BUR, 360°F (182°C) melt temperature, using an 8" die with 0.025" die gap, at 150 lb/hr.

[1]  Estimated from TEDD value of 0.3 ft-lbs. for standard dart and 26" drop height.

These are typical values not to be construed as specification limits.

| Product | GA503027 | GA503028 |
|---|---|---|
| Slip (ppm) | 1,500 | 800 |
| Antiblock (ppm) | 7,000 | 1,300 |
| Processing Aid | Present | None |