Alathon® L3810X03

Medium Density Polyethylene LyondellBasell Industries

Message:

ALATHON L 3810X03 is an experimental medium density polyethylene copolymer with a broad and bimodal molecular weight distribution. Typical applications include merchandise bags, multi-wall bag film, heavy-duty shipping sacks and roll stock. L 3810X03 is also an excellent blend component for processors who wish to improve the tensile properties and processability of LLDPE film resins or improve the heat seal of HDPE films. This resin can be used to produce mono- and multi-layer films requiring toughness as well as an improved feel and appearance. L 3810X03 also provides processors without grooved feed extruders an opportunity to experience the advantages of higher molecular weight resins.

| General Information | | | | |
|---------------------------------------|---|----------|-------------|--|
| Features | Copolymer | | | |
| | Compliance of Food Exposure | | | |
| | Medium molecular weight | | | |
| | Medium wide molecular weight distribution | | | |
| | | | | |
| Uses | Films | | | |
| | Bags | | | |
| | Mixing | | | |
| | | | | |
| Agency Ratings | FDA 21 CFR 177.1520 | | | |
| Forms | Particle | | | |
| Processing Method | Film extrusion | | | |
| Physical | Nominal Value | Unit | Test Method | |
| Density | 0.940 | g/cm³ | ASTM D1505 | |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 | | | | |
| kg) | 0.10 | g/10 min | ASTM D1238 | |
| Films | Nominal Value | Unit | Test Method | |
| Film Thickness - Tested | 25 | μm | | |
| secant modulus | | | ASTM D882 | |
| MD : 25 μm | 662 | MPa | ASTM D882 | |
| TD : 25 μm | 855 | MPa | ASTM D882 | |
| Tensile Strength | | | ASTM D882 | |
| MD: Yield, 25 µm | 23.4 | МРа | ASTM D882 | |
| TD: Yield, 25 µm | 27.6 | МРа | ASTM D882 | |
| MD: Break, 25 μm | 66.2 | МРа | ASTM D882 | |
| TD: Break, 25 µm | 46.2 | МРа | ASTM D882 | |
| Tensile Elongation | | | ASTM D882 | |
| MD: Break, 25 µm | 380 | % | ASTM D882 | |
| TD: Break, 25 µm | 620 | % | ASTM D882 | |
| Dart Drop Impact (25 μm) | 76 | g | ASTM D1709 | |
| Total Energy Impact (25 µm) | 0.461 | J | ASTM D4272 | |

| Elmendorf Tear Strength | | | ASTM D1922 |
|-------------------------|---------------|------|------------|
| MD : 25 μm | 16 | g | ASTM D1922 |
| TD : 25 μm | 560 | g | ASTM D1922 |
| Extrusion | Nominal Value | Unit | |
| Melt Temperature | 193 - 210 | °C | |
| Extrusion instructions | | | |

Typical Process ConditionsBlow-up Ratio: 4:1

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