# Alathon® XL3805

Medium Density Polyethylene

LyondellBasell Industries

## Message:

ALATHON XL 3805 is an experimental, high molecular weight, medium density polyethylene copolymer with a broad and bimodal mo lecular weight distribution. Films produced from this resin exhibit excellent MD and TD tear with a soft feel and improved optics in a HMW resin. Applications include typical thinner gauge (<1.0 mil.) merchandise bags, grocery sacks, can liners, and produce bags as well as thicker gauge (>1.0 mil.) heavy duty shipping sacks, construction film and agriculture film. This resin can be used to produce mono- and multi-layer films requiring toughness as well as improved feel and appearance.

| General Information | | | |
|---|---|---|---|
| Features | High molecular weight<br>Copolymer<br>Good tear strength<br>Good toughness<br>Compliance of Food Exposure<br>Medium wide molecular weight distribution | | |
| Uses | Films<br>Lining<br>Bags<br>Architectural application field<br>Agricultural application | | |
| Agency Ratings | FDA 21 CFR 177.1520 | | |
| Forms | Particle | | |
| Processing Method | Film extrusion | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Density | 0.938 | g/cm³ | ASTM D1505 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 0.057 | g/10 min | ASTM D1238 |
| **Films** | **Nominal Value** | **Unit** | **Test Method** |
| secant modulus | | | ASTM D882 |
| MD : 13 µm | 641 | MPa | ASTM D882 |
| TD : 13 µm | 772 | MPa | ASTM D882 |
| Tensile Strength | | | ASTM D882 |
| MD: Yield, 13 µm | 26.3 | MPa | ASTM D882 |
| TD: Yield, 13 µm | 23.1 | MPa | ASTM D882 |
| MD: Broken, 13 µm | 88.3 | MPa | ASTM D882 |
| TD: Broken, 13 µm | 47.5 | MPa | ASTM D882 |
| Tensile Elongation | | | ASTM D882 |
| MD: Broken, 13 µm | 270 | % | ASTM D882 |

| | | | |
|---|---|---|---|
| TD: Broken, 13 µm | 390 | % | ASTM D882 |
| Total Energy Impact | | | ASTM D4272 |
| 13 µm | 3.12 | J | ASTM D4272 |
| 100 µm | 5.97 | J | ASTM D4272 |
| Elmendorf Tear Strength | | | ASTM D1922 |
| MD : 13 µm | 20 | g | ASTM D1922 |
| MD : 100 µm | 420 | g | ASTM D1922 |
| TD : 13 µm | 40 | g | ASTM D1922 |
| TD : 100 µm | 750 | g | ASTM D1922 |

| Extrusion | Nominal Value | Unit |
|---|---|---|
| Melt Temperature | 199 - 210 | °C |

Extrusion instructions

Typical Extrusion ConditionsBlow Up Ratio: 4:1Neck Height: 8 Die Diameters



## Recommended distributors for this material

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