## Exceed ${ }^{\text {TM }} 1018$ Series <br> Performance Polymer

| Product Description |  |  |  |
| :---: | :---: | :---: | :---: |
| Exceed ${ }^{\text {TM }} 1018$ are ethylene 1-hexene copolymer resins. Films made from Exceed ${ }^{\text {TMM }} 1018$ resins have outstanding tensile, impact strength and puncture. These superior strength properties, along with excellent drawability, allow downgauging in bag applications. TnPP is not intentionally added to Exceed ${ }^{\text {TM }} 1018$ resins. |  |  |  |
| General |  |  |  |
| Availability ${ }^{1}$ | - Africa \& Middle East <br> - Asia Pacific | - No |  |
| Additive | - Exceed™ 1018 MK: Antiblock: 5000 ppm; Slip: 1000 ppm; Processing Aid: Yes; Thermal Stabilizer: Yes <br> - Exceed™ 1018MF: Antiblock: 4500 ppm; Slip: 450 ppm; Processing Aid: Yes; Thermal Stabilizer: Yes <br> - Exceed ${ }^{\text {™ }} 1018 \mathrm{MA}$ : Antiblock: No; Slip: No; Processing Aid: Yes; Thermal Stabilizer: Yes <br> - Exceed™ 1018MJ: Antiblock: 4500 ppm; Slip: No; Processing Aid: Yes; Thermal Stabilizer: Yes <br> - Exceed ${ }^{\text {TM }} 1018 \mathrm{MB}$ : Antiblock: 2500 ppm; Slip: 800 ppm; Processing Aid: Yes; Thermal Stabilizer: Yes |  |  |
| Applications | - Agricultural Film - Form Fill And Seal Packaging - Overwrap Film <br> - Bag in Box - Freezer Film - Packaging Films <br> - Barrier Food Packaging - General Packaging - Premium Trash Bags <br> - Blown Film - Heavy Duty Bags - Stand Up Pouches <br> - Blown Stretch Film - Industrial Packaging - Trash Bags <br> - Bread Bags - Lamination Film - Trash Can Liners <br> - Food Packaging - Multilayer Packaging Film  |  |  |
| Revision Date | . 07/12/2022 |  |  |
| Resin Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
| Density / Specific Gravity | $0.918 \mathrm{~g} / \mathrm{cm}^{3}$ | $0.918 \mathrm{~g} / \mathrm{cm}^{3}$ | ASTM D792 |
| Melt Index ( $190^{\circ} \mathrm{C} / 2.16 \mathrm{~kg}$ ) | $1.0 \mathrm{~g} / 10 \mathrm{~min}$ | $1.0 \mathrm{~g} / 10 \mathrm{~min}$ | ASTM D1238 |
| Peak Melting Temperature | $244{ }^{\circ} \mathrm{F}$ | $118{ }^{\circ} \mathrm{C}$ | ExxonMobil Method |
| Film Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
| Tensile Strength at Yield MD | 1300 psi | 8.7 MPa | ASTM D882 |
| Tensile Strength at Yield TD | 1300 psi | 8.8 MPa | ASTM D882 |
| Tensile Strength at Break MD | 9400 psi | 60 MPa | ASTM D882 |
| Tensile Strength at Break TD | 8400 psi | 60 MPa | ASTM D882 |
| Elongation at Break MD | 500 \% | 500 \% | ASTM D882 |
| Elongation at Break TD | 640 \% | 640 \% | ASTM D882 |
| Secant Modulus MD-1\% Secant | 24000 psi | 170 MPa | ASTM D882 |
| Secant Modulus TD - 1\% Secant | 26000 psi | 180 MPa | ASTM D882 |
| Dart Drop Impact | 550 g | 550 g | ASTM D1709A |
| Elmendorf Tear Strength MD | 220 g | 220 g | ASTM D1922 |
| Elmendorf Tear Strength TD | 370 | 370 | ASTM D1922 |
| Puncture Force | 13 lbf | 59 N | ExxonMobil Method |
| Puncture Energy | $49 \mathrm{in} \cdot \mathrm{lb}$ | 5.5 J | ExxonMobil Method |
| Optical Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
| Gloss (45 ${ }^{\circ}$ ) | 43 | 43 | ASTM D2457 |
| Haze | 16 \% | 16 \% | ASTM D1003 |

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## Legal Statement

Tris(nonylphenol)phosphite (TNPP) CAS\# 26523-78-4 is not intentionally used by ExxonMobil in this product. Although this product is not routinely tested for its presence, based on product composition knowledge this substance is not expected to be present. However, the fact that this substance is not intentionally used by ExxonMobil in this product does not exclude that trace levels of this substance may be present as a result of the specific characteristics of the raw materials and/or of the manufacturing process.

This product is not intended for use in medical applications and should not be used in any such applications.
Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

Processing Statement
Film ( 1 mil $/ 25.4$ micron) made on a 2.5 inch ( 63.5 mm ) blown film line with a $2.5: 1$ blow-up ratio, a melt temperature of $403^{\circ} \mathrm{F}\left(206^{\circ} \mathrm{C}\right)$, a 60 mil ( 1.52 mm ) die gap at a rate of $10 \mathrm{lbs} / \mathrm{hr} / \mathrm{in}$ die circumference ( $1.79 \mathrm{~kg} / \mathrm{hr} / \mathrm{cm}$ ).

## Notes

Typical properties: these are not to be construed as specifications.
${ }^{1}$ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs
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