

# Exceed™ 4518PA

## Metallocene Polyethylene Resin

### Product Description

Exceed 4518PA resin is a metallocene ethylene-hexene copolymer. Films made from Exceed 4518PA resin have outstanding tensile properties and impact and puncture toughness. These superior properties, along with excellent drawability, make this a versatile resin for both monolayer and multilayer packaging and cast stretch film.

### General

|              |                                                                                                                                     |                                                                                                                                                                                                           |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Additive     | <ul style="list-style-type: none"> <li>Antiblock: No</li> <li>Slip: No</li> </ul>                                                   | <ul style="list-style-type: none"> <li>Processing Aid: No</li> <li>Thermal Stabilizer: Yes</li> </ul>                                                                                                     |
| Applications | <ul style="list-style-type: none"> <li>Bag in Box</li> <li>Barrier Food Packaging</li> <li>Blown Film</li> <li>Cast Film</li> </ul> | <ul style="list-style-type: none"> <li>Cast Stretch Film</li> <li>Diaper Backsheet</li> <li>Form Fill And Seal Packaging</li> <li>Hygiene film</li> <li>Packaging Films</li> <li>Personal Care</li> </ul> |

| Resin Properties           | Typical Value (English) | Typical Value (SI)      | Test Based On     |
|----------------------------|-------------------------|-------------------------|-------------------|
| Density                    | 0.918 g/cm <sup>3</sup> | 0.918 g/cm <sup>3</sup> | ExxonMobil Method |
| Melt Index (190°C/2.16 kg) | 4.5 g/10 min            | 4.5 g/10 min            | ASTM D1238        |
| Peak Melting Temperature   | 237 °F                  | 114 °C                  | ExxonMobil Method |

| Film Properties               | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-------------------------------|-------------------------|--------------------|-------------------|
| Tensile Strength at Yield MD  | 1200 psi                | 8.3 MPa            | ASTM D882         |
| Tensile Strength at Yield TD  | 1100 psi                | 7.3 MPa            | ASTM D882         |
| Tensile Strength at Break MD  | 9700 psi                | 70 MPa             | ASTM D882         |
| Tensile Strength at Break TD  | 7000 psi                | 48 MPa             | ASTM D882         |
| Elongation at Break MD        | 500 %                   | 500 %              | ASTM D882         |
| Elongation at Break TD        | 730 %                   | 730 %              | ASTM D882         |
| Secant Modulus MD - 1% Secant | 15000 psi               | 100 MPa            | ASTM D882         |
| Secant Modulus TD - 1% Secant | 18000 psi               | 120 MPa            | ASTM D882         |
| Dart Drop Impact              | 140 g                   | 140 g              | ASTM D1709A       |
| Elmendorf Tear Strength MD    | 150 g                   | 150 g              | ASTM D1922        |
| Elmendorf Tear Strength TD    | 460 g                   | 460 g              | ASTM D1922        |
| Puncture Force                | 11 lbf                  | 48 N               | ExxonMobil Method |
| Puncture Energy               | 39 in-lb                | 4.5 J              | ExxonMobil Method |

| Optical Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------|-------------------------|--------------------|---------------|
| Gloss (45°)        | 87                      | 87                 | ASTM D2457    |
| Haze               | 2.2 %                   | 2.2 %              | ASTM D1003    |

