

**TIFLEX™ 4470G Polyethylene Resin****Overview**

TIFLEX™ 4470G Polyethylene Resin is a high performance LLDPE for cast stretch delivering unprecedented balance of properties (m-LLDPE like). It is specifically designed for large and high output cast film lines to make high performance stretch films. Films made from this resin exhibit an excellent balance of mechanical and stretchability performance properties. It can also be used as a core resin in coextruded cast film structures for films in the thickness range between 10 and 35 microns.

**Applications**

- Cast stretch wrap film

**Complies with**

- U.S. FDA FCN 1539
- EU, No 10/2011

**Additive**

- Antiblock: No
- Processing aid: No
- Slip: No

**Typical Properties**

| Physical                                  | Nominal Value | Unit (English)    | Nominal Value | Unit (SI)         | Test Method <sup>1</sup> |
|---|---------------|-------------------|---------------|-------------------|--------------------------|
| Density                                   | 0.916         | g/cm <sup>3</sup> | 0.916         | g/cm <sup>3</sup> | ASTM D792                |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 4.0           | g/10 min          | 4.0           | g/10 min          | ASTM D1238               |
| Films                                     | Nominal Value | Unit (English)    | Nominal Value | Unit (SI)         | Test Method              |
| Film Thickness — Tested                   | 0.67          | mil               | 17            | µm                |                          |
| Film Puncture Energy                      | 16            | in·lb             | 1.90          | J                 |                          |
| Film Puncture Force                       | 6             | lbt               | 27.0          | N                 |                          |
| Secant Modulus                            |               |                   |               |                   | ISO 527-3                |
| 2% Secant, MD                             | 13488         | psi               | 93.0          | MPa               |                          |
| 2% Secant, TD (17 µm)                     | 11748         | psi               | 81.0          | MPa               |                          |

1. ASTM: American Society for Testing and Materials  
ISO: International Standardization Organization

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.



## Typical Properties (Cont.)

| Films  | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method     |
|--|---------------|----------------|---------------|-----------|-----------------|
| Tensile Strength   |               |                |               |           | ASTM D882       |
| MD <sup>2</sup> (Yield, 17 μm)   | 696           | psi            | 4.80          | MPa       |                 |
| TD <sup>2</sup> (Yield, 17 μm)   | 1029          | psi            | 7.10          | MPa       |                 |
| MD <sup>2</sup> (Break, 17 μm)   | 4496          | psi            | 31.0          | MPa       |                 |
| TD <sup>2</sup> (Break, 17 μm)   | 3916          | psi            | 27.0          | MPa       |                 |
| Tensile Elongation   |               |                |               |           | ASTM D882       |
| MD <sup>2</sup> (Break, 17 μm)   | 420           | %              | 420           | %         |                 |
| TD <sup>2</sup> (Break, 17 μm)   | 590           | %              | 590           | %         |                 |
| Dart Drop Impact <sup>2</sup>  | 530           | g              | 530           | g         | ASTM D1709A     |
| Elmendorf Tear Strength  |               |                |               |           | ASTM D1922      |
| MD <sup>2</sup> (Break, 17 μm)   | 150           | g              | 150           | g         |                 |
| TD <sup>2</sup> (Break, 17 μm)   | 330           | g              | 330           | g         |                 |
| Thermals   | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method     |
| Melting Temperature  | 233           | °F             | 112           | °C        | Internal Method |
| Optical  | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method     |
| Gloss  | 91            | %              | 91            | %         | ASTM D2457      |
| Haze   | 0.700         | %              | 0.700         | %         | ASTM D1003      |
| Extrusion Notes  |               |                |               |           |                 |
| Fabrication Conditions for Cast Film Resins:   |               |                |               |           |                 |
| <ul style="list-style-type: none"> <li>• Melt Temperature: 220–280°C</li> <li>• Line Speed 250–600 m/min</li> <li>• Recommended Gauge Range: 10–60 μm</li> </ul> |               |                |               |           |                 |

2. Cast film, 250 m/min; Chill roll 24°C

