

**TIFLEX™ 4460GC Polyethylene Resin****Description**

TIFLEX™ 4460GC 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
- Artificial turf
- Diaper backsheet

**Complies with**

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

Consult the regulations for complete details.

**Additive**

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

**Properties<sup>1</sup>**

Physical	Nominal Value	Unit	Test Method <sup>2</sup>
Density	0.918	g/cm <sup>3</sup>	ASTM D792
Base Density <sup>3</sup>	0.918	g/cm <sup>3</sup>	Internal Method
Melt Mass-Flow Rate (MFR) 190°C/2.16 kg	4.0	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Film Thickness — Tested	17	µm	
Film Puncture Energy	2.50	J	Internal Method
Film Puncture Force	30.8	N	Internal Method
Secant Modulus			ISO 527-3
2% Secant, MD (17 µm)	93.0	MPa	
2% Secant, TD (17 µm)	83.0	MPa	

1. Typical properties: these are not to be construed as specifications.
2. ASTM: American Society for Testing and Materials  
ISO: International Standardization Organization
3. Base Density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.



## Properties (Cont.)

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>4</sup>			ASTM D882
MD: Yield, 17 $\mu$ m	5.0	MPa	
TD: Yield, 17 $\mu$ m	7.2	MPa	
MD: Break, 17 $\mu$ m	30.0	MPa	
TD: Break, 17 $\mu$ m	26.0	MPa	
Tensile Elongation <sup>4</sup>			ASTM D882
MD: Break, 17 $\mu$ m	440	%	
TD: Break, 17 $\mu$ m	580	%	
Dart Drop Impact <sup>4</sup>	500	g	ASTM D1709A
Elmendorf Tear Strength <sup>4</sup>			ASTM D1922
MD: 17 $\mu$ m	140	g	
TD: 17 $\mu$ m	315	g	
Thermal	Nominal Value	Unit	Test Method
Melting Temperature	113	$^{\circ}$ C	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss	91		ASTM D2457
Haze	0.7	%	ASTM D1003

### Extrusion Notes

Fabrication Conditions for Cast Film Resin:

- Melt Temperature: 220–280 $^{\circ}$ C
- Line Speed 250–600 m/min
- Recommended Gauge Range: 10–60  $\mu$ m

4. Cast film, 250 m/min; Chill roll 24 $^{\circ}$ C.

