Manufacturer website: https://www.exxonmobilchemical.com/en/products/polyethylene

Product Datasheet

ExxonMobil Signature Polymers

Exceed™ Tough+ m 0512.ML

Metallocene Polyethylene

Product Description

Exceed™ Tough+ m 0512.ML is an extreme Performance linear low density polyethylene 1-hexene copolymer that is especially designed to have high melt strength and superior mechanical and optical properties. The combination of high toughness (impact and puncture), melt stability, superior flex crack resistance and good sealing performance makes this grade a versatile blown film resin. TnPP is not intentionally added to Exceed™ Tough+ m 0512.ML.

General

Availability [1]	▪ Africa & Middle East ▪ Asia Pacific	▪ Europe ▪ Latin America	▪ North America
Additive	▪ Exceed™ Tough+ m 0512.ML: Antiblock: No; Slip: No; Processing Aid: Yes; Thermal Stabilizer: Yes		
Applications	▪ Cast Geomembrane ▪ Construction Liners ▪ Flexible Packaging ▪ Food Packaging	▪ Frozen Foods ▪ Greenhouse Film ▪ Lamination Film ▪ Liquid Packaging	▪ Mulch Film ▪ Shrink Film ▪ Stretch Hood Film ▪ Stretch Sleeves
Form(s)	▪ Pellets		
Revision Date	▪ 09/01/2021		

Resin Properties	Typical Value (English)		Typical Value (SI)		Test Based On
Density / Specific Gravity	0.912	g/cm^3	0.912	g/cm^3	ASTM D792
Melt Index (190°C/2.16 kg)	0.50	g/10 min	0.50	g/10 min	ASTM D1238

Film Properties	Typical Value (English)		Typical Value (SI)		Test Based On
Tensile Strength at Yield MD	980	psi	6.8	MPa	ASTM D882
Tensile Strength at Yield TD	980	psi	6.7	MPa	ASTM D882
Tensile Strength at Break MD	9700	psi	70	MPa	ASTM D882
Tensile Strength at Break TD	9700	psi	70	MPa	ASTM D882
Elongation at Break MD	410	%	410	%	ASTM D882
Elongation at Break TD	630	%	630	%	ASTM D882
Secant Modulus MD - 1% Secant	16000	psi	110	MPa	ASTM D882
Secant Modulus TD - 1% Secant	19000	psi	130	MPa	ASTM D882
Dart Drop Impact	900	g	900	g	ASTM D1709A
Elmendorf Tear Strength MD	80	g	80	g	ASTM D1922
Elmendorf Tear Strength TD	270	g	270	g	ASTM D1922
Puncture Force	14	lbf	60	N	ExxonMobil Method
Puncture Energy	46	in·lb	5.2	J	ExxonMobil Method

Optical Properties	Typical Value (English)		Typical Value (SI)		Test Based On
Gloss (45°)	66		66		ASTM D2457
Haze	5.3	%	5.3	%	ASTM D1003

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.

Exceed™ Tough+ m 0512.ML can in principle be used in food contact applications in all EU Member States and in the USA (FDA). Migration or use limitations may apply. Please contact your ExxonMobil Chemical representative for more detailed information and/or actual compliance certification documents for the specific grade of interest.

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. For detailed Product Stewardship information, please contact Customer Service.

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ExxonMobil

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Processing Statement

Film (1 mil/25.4 micron) made from Exceed™ Tough+ m 0512.ML on a 3.5 in(90 mm)blown film line with a 2.5:1 blow-up ratio, a target melt temperature of 425°F(218°C), a 30 mil(0.76 mm) die gap at a rate of 5 lbs/hr/rpm.

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: Contact Us

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