

# Exceed<sup>TM</sup> Tough+ m 0211.ML (Legacy name: Exceed<sup>TM</sup> XP 7021ML)

(Legacy name: Exceed™ XP̄ 7021ML) Metallocene Polyethylene

### **Product Description**

Exceed<sup>™</sup> Tough+ m 0211.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<sup>™</sup> Tough+ m 0211.ML.

General					
Availability <sup>1</sup>	<ul> <li>Africa &amp; Middle East</li> </ul>		<ul> <li>Europe</li> </ul>	<ul> <li>North America</li> </ul>	
	<ul> <li>Asia Pacific</li> </ul>		<ul> <li>Latin America</li> </ul>		
Additive	Exceed™ Tough+ m 0211.ML: Antiblock: No; Slip: No; Processing Aid: Yes; Thermal Stabilizer: Yes				
Applications	<ul><li>Blow Molding</li><li>Blown Geomembrane</li><li>Construction Liners</li><li>Flexible Packaging</li></ul>		<ul><li>Food Packaging</li><li>Greenhouse Film</li><li>Lamination Film</li><li>Liquid Packaging</li></ul>	<ul><li>Shrink Film</li><li>Stretch and Shrink Sleeves</li><li>Stretch Hood Film</li></ul>	
Form(s)	<ul> <li>Pellets</li> </ul>				
Revision Date	• 09/01/2021				
Resin Properties	Typical Value	(English)	Typical Value	(SI)	Test Based On
Density / Specific Gravity		g/cm³		g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	0.20	g/10 min	0.20	g/10 min	ASTM D1238
Film Properties	Typical Value	(English)	Typical Value	(SI)	Test Based On
Tensile Strength at Yield MD	1000	psi	6.9	MPa	ASTM D882
Tensile Strength at Yield TD	1000	psi	7.2	MPa	ASTM D882
Tensile Strength at Break MD	11000	psi	70	MPa	ASTM D882
Tensile Strength at Break TD	10000	psi	70	MPa	ASTM D882
Elongation at Break MD	360	%	360	%	ASTM D882
Elongation at Break TD	600	%	600	%	ASTM D882
Secant Modulus MD - 1% Secant	17000	psi	120	MPa	ASTM D882
Secant Modulus TD - 1% Secant	23000	psi	160	MPa	ASTM D882
Dart Drop Impact	1100	9	1100	g	ASTM D1709A
Elmendorf Tear Strength MD	40	g	40	g	ASTM D1922
Elmendorf Tear Strength TD	210	9	210	9	ASTM D1922
Puncture Force	15	lbf	66	N	ExxonMobil Method
Puncture Energy	45	in·lb	5.1	J	ExxonMobil Method
Optical Properties	Typical Value	(English)	Typical Value	(SI)	Test Based On
Gloss (45°)	52		52		ASTM D2457
Haze	8.4	%	8.4	%	ASTM D1003

## Legal Statement

Exceed<sup>™</sup> Tough+ m 0211.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.

#### **Processing Statement**

Film(1 mil/25.4 micron) made from Exceed<sup>TM</sup> Tough+ m 0211.ML on a 3.5 in(90mm)blown film line with a 2.5:1 blow-up ratio, a target melt temperature of  $450^{\circ}$ 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.

Effective Date: 09/01/2021 ExxonMobil Page: 1 of 2

<sup>&</sup>lt;sup>1</sup> Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

Exceed™ Tough+ m 0211.ML



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

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