ExxonMobil Signature Polymers

Exact™ 5171

Ethylene-based Plastomer Resin

Product Description

Exact™ 5171 plastomer resin is an ethylene 1-octene copolymer produced using a proprietary metallocene technology. It exhibits outstanding plastic and elastomeric properties including superior toughness. Exact™ 5171 is designed for modification of polypropylene and polyethylene in a wide range of applications such as injection molding, extrusion blow molding, blown and cast film, and profile extrusion.

Key Features

- Premium low temperature impact modifier
- Free-flowing pellets
- Superior toughness and tear strength

General

Availability [1]	▪ Africa & Middle East ▪ Asia Pacific	▪ Europe ▪ Latin America	▪ North America
Applications	▪ Compounding and TPO ▪ General purpose elastomer	▪ Injection Molding ▪ Polymer Modification	▪ Shoe sole, foam, and footwear
Form(s)	▪ Pellets		
Revision Date	▪ 10/22/2020		

Physical	Typical Value (English)		Typical Value (SI)		Test Based On
Density	0.868	g/cm³	0.868	g/cm³	ASTM D1505
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.3	g/10 min	2.3	g/10 min	ASTM D1238

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Durometer Hardness			ExxonMobil Method
Shore A	70	70	
Shore D	19	19	

Mechanical	Typical Value (English)		Typical Value (SI)		Test Based On
Tensile Stress [2]	> 1200	psi	> 8.1	MPa	ExxonMobil Method
Tensile Stress at 100% (73°F (23°C))	350	psi	2.4	MPa	ExxonMobil Method
Elongation at Break [2]	> 800	%	> 800	%	ExxonMobil Method
Flexural Modulus - 1% Secant	2000	psi	14	MPa	ExxonMobil Method

Elastomers	Typical Value (English)		Typical Value (SI)		Test Based On
Tensile Stress at 300% (73°F (23°C))	476	psi	3.28	MPa	ExxonMobil Method
Tear Strength (Die C)	204	lbf/in	35.8	kN/m	ExxonMobil Method
Mooney Viscosity (ML 1+4, 257°F (125°C))	18	MU	18	MU	ExxonMobil Method

Thermal	Typical Value (English)		Typical Value (SI)		Test Based On
Vicat Softening Temperature	130	°F	54.4	°C	ExxonMobil Method
Peak Melting Temperature	132	°F	56	°C	ExxonMobil Method

Additional Information

This product is talc dusted.

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Legal Statement

Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

This product is not intended for use in medical applications and should not be used in any such applications.

Processing Statement

Tensile testing was conducted at a crosshead speed of 20 in/min.

Physical properties were measured on compression molded specimens.

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.

[2] All specimens reached extension limit, did not break.

For additional technical, sales and order assistance: Contact Us

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