ExxonMobil

Exxelor™ PE 1040

Polymer Resin

Product Description

Exxelor PE 1040 polymer resin is a maleic anhydride functionalized high density polyethylene, produced by reactive extrusion. It has been primarily designed to act as a coupling agent in filled polyethylene compounds, or as a coupling agent or tie layer in multilayer polyethylene systems to ensure compatibility and improve adhesion of the different layers.

This grade is designed to:

- Function as a coupling agent between reinforcing materials such as natural and mineral fillers and high density polyethylene to improve mechanical properties.
- Achieve compatibility and adhesion between high density polyethylene and polyamide.
- Function as a tie layer in multilayer tank systems with high density polyethylene and a barrier layer.

Key Features

Performance enhancements in natural and mineral-filled:

- Improved mechanical properties.
- Improved notched Izod and Charpy impact strength.
- Reduced water absorption.
- Adhesion as a tie layer in polyethylene based multilayer tank systems.

Physical	Typical Value (English)		Typical Value (SI)		Test Based On
Density	0.960	g/cm³	0.960	g/cm³	ExxonMobil Method
Melt Mass-Flow Rate (MFR) [2]					ExxonMobil Method
190°C/2.16 kg	1	g/10 min	1	g/10 min	
230°C/2.16 kg	3	g/10 min	3	g/10 min	
Maleic Anhydride Graft Level [3]	High		High		ExxonMobil Method
Volatiles	< 0.15	%	< 0.15	%	AM-S 350.03

Thermal	Typical Value (English)		Typical Value (SI)		Test Based On
Peak Melting Temperature	273	°F	134	°C	ExxonMobil Method

Optical	Typical Value (English)		Typical Value (SI)		Test Based On
Yellowness Index	< 10	YI	< 10	YI	ASTM E313

Additional Information

Storage and Handling: Comprehensive material safety data sheets are provided to recommend safe practices during usage. For easy handling and storage, this grade is supplied as free-flowing pellets normally packed in 25 kg bags (50 bags per pallet), 450 kg octabins or 1 ton supersacks.

Legal Statement

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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Processing Statement

Exxelor PE 1040 resin can be added to high density polyethylene to achieve optimum dispersion with the natural or mineral filler system and result in the best performance. Compounding parameters that can lead to optimized performance include extruder type, screw design, barrel temperature, screw speed, throughput, residence time and material feeding sequence. Our experienced technical service engineers and chemists are always on hand to help you in achieving the best performance from your processing and compounding operations.

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] Value reported is an estimate based on ExxonMobil's correlation from production data measured at other standard conditions: Based on ASTM D1238; ISO 1133

[3] MA level is typically in the range of 0.5 to 1.0 wt%. Value reported is an estimate based on ExxonMobil's correlation from production data measured at other standard conditions.