

Technical Data Sheet

Petrothene LP540203

High Density Polyethylene



Product Description

Petrothene LP540203 is a copolymer resin selected by customers for blown film applications. This resin offers high ESCR, stiffness, excellent appearance and bubble stability. LP540203 is typically used for high strength multi-wall sack liners and barrier sheeting. It is also useful as a blend component for improved stiffness and machinability.

Regulatory Status

For regulatory compliance information, see *Petrothene* LP540203 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	North America
Application	Bags & Pouches; Food Packaging Film; Lamination Film; Secondary Packaging; Shrink Film
Market	Rigid Packaging
Processing Method	Blown Film; Sheet and Profile Extrusion
Attribute	General Purpose; High Tensile Strength

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	0.17	g/10 min	0.17	g/10 min	ASTM D1238
Density, (23 °C)	0.940	g/cm ³	0.940	g/cm ³	ASTM D1505
Mechanical					
Tensile Strength at Yield	3180	psi	21.9	MPa	ASTM D638
Environmental Stress Crack Resistance, F ₅₀	>1000	hr	>1000	hr	ASTM D1693
Film					
Dart Drop Impact Strength, F50	70	g	70	g	ASTM D1709
Tensile Strength at Break					
MD	6800	psi	46.9	MPa	ASTM D882
TD	4300	psi	29.6	MPa	ASTM D882
Tensile Strength at Yield					
MD	2800	psi	19.3	MPa	ASTM D882
TD	3300	psi	22.8	MPa	ASTM D882
Tensile Elongation at Break					
MD	510	%	510	%	ASTM D882
TD	680	%	680	%	ASTM D882
Secant Modulus					
MD	82000	psi	565	MPa	ASTM D882
TD	110000	psi	758	MPa	ASTM D882

Elmendorf Tear Strength			
MD	40 g	40 g	ASTM D1922
TD	1150 g	1150 g	ASTM D1922
Hardness			
Shore Hardness, (Shore D)	62	62	ASTM D2240
Thermal			
Vicat Softening Temperature	246 °F	119 °C	ASTM D1525
Low Temperature Brittleness	°F	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	147 °F	64 °C	ASTM D648

Notes

Mechanical tensile properties were run on a Type IV specimen.

Data obtained from 2.0 mil film produced on a blown film line with a 60 mil die gap, 2.5:1 BUR, and 410-430 °F (210-220 °C) melt extrusion temperature.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

General Extrusion Conditions**Company Information**

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

© LyondellBasell Industries Holdings, B.V. 2017

Disclaimer

Before using a product sold by a company of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally.

SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

Users should review the applicable Safety Data Sheet before handling the product.

This product(s) may not be used in the manufacture of any of the following, without prior written approval by Seller for each specific product and application:

- (i) U.S. FDA Class I or II Medical Devices; Health Canada Class I, II or III Medical Devices; European Union Class I or II Medical Devices;
- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
- (v) safety components in automotive applications, for example: air bags, air bag unit housings and covers, seat belt mechanisms, brake systems, pedals and pedal supports, steering systems.

The product(s) may not be used in:

- (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices;
- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

In addition to the above, LyondellBasell may further prohibit or restrict the use of its products in certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

Adflex, Adstif, Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Alkylate, Amazing Chemistry, Aquamarine, Aquathene, Avant, Catalloy, Clyrell, CRP, Crystex, Dexflex, Duopac, Duoprime, Explore & Experiment, Filmex, Flexathene, Fueling the power to win, Glacido, Hifax, Hiflex, Histif, Hostacom, Hostalen, Hyperzone, Ideal, Indure, Integrate, Koattro, LIPP, Lucalen, Luflexen, Lupolen, Luposim, Lupostress, Lupotech, Metocene, Microthene, Moplen, MPDIOL, Nerolex, Nexprene, Petrothene, Plexar, Polymeg, Pristene, Prodflex, Pro-fax, Punctilious, Purell, Refax, SAA100, SAA101, Sequel, Softell, Spherilene, Spheripol, Spherizone, Starflex, Stretchene, Superflex, TBAC, Tebol, T-Hydro, Toppyl, Trans4m, Tufflo, Ultrathene, Vacido and Valtec are trademarks owned and/or used by the LyondellBasell family of companies.

Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Aquamarine, Avant, CRP, Crystex, Dexflex, Duopac, Duoprime, Explore & Experiment, Filmex, Flexathene, Hifax, Hostacom, Hostalen, Ideal, Integrate, Koattro, Lucalen, Lupolen, Metocene, Microthene, Moplen, MPDIOL, Nexprene, Petrothene, Plexar, Polymeg, Pristene, Pro-fax, Punctilious, Purell, Sequel, Softell, Spheripol, Spherizone, Starflex, Tebol, T-Hydro, Toppyl, Tufflo and Ultrathene are registered in the U.S. Patent and Trademark Office.

