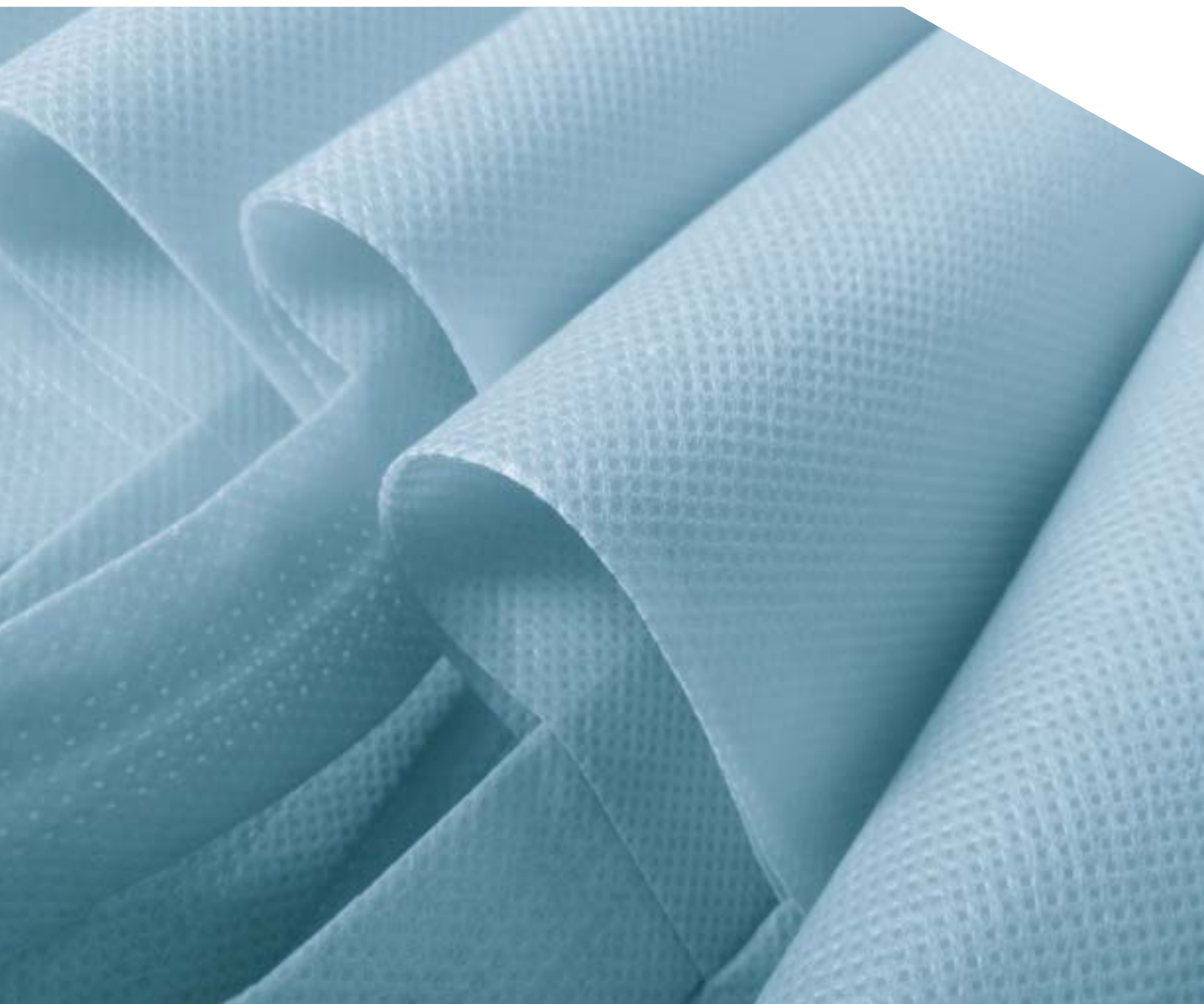


Nonwoven materials

Benefit from a comprehensive portfolio of high performance materials for nonwoven applications



Polypropylene resins

Polypropylene is advantageously used in a diverse set of textile applications ranging from geo-textiles which stabilize our roads to non-woven fabrics which help to keep the baby's skin dry. All LYB grades are produced with the latest generation of *Avant* Ziegler/Natta non-Phthalate catalyst.



With its low density polypropylene yields the highest volume of fiber per unit weight compared with other fiber, such as nylon, polyester and acrylic, offering light-weight fabrics with high loft. Polypropylene fabrics have the ability to transmit moisture instead of absorbing it, making it the material of choice for sanitary products. LYB offers a wide range of polypropylene grades for non woven applications.

Moplen HP561R

This grade has a very-narrow molecular weight distribution and is used for the production of high-tenacity yarns and spun bond nonwovens. With MFR 25 g/10 min (2.16 kg/230°C), *Moplen* HP561R is formulated with an anti-gas fading stabilization package.

Moplen HP561S

This grade has a very-narrow molecular weight distribution and is used for the production of fine filaments for spun bond nonwovens. With MFR 32 g/10 min (2.16 kg/230°C), *Moplen* HP561S is formulated with an anti-gas fading stabilization package.

**Moplen HP452J, HP552K, HP552L**

The higher molecular weight of these grades can enable customers to increase the fiber tenacity, which translates into stronger nonwovens. These grades are formulated with an anti-gas fading stabilization package and are used for the production of high-tenacity staple fibers.

Moplen PP567P

A homo-polymer grade with MFR 18 g/10 min (2.16 kg/230°C) that is formulated with an anti-gas fading stabilization package. *Moplen* PP567P has a narrow molecular weight distribution and is used for the production of high-tenacity spun-bonded nonwovens.

Moplen HP561S HP

This grade has a very-narrow molecular weight distribution and is used for the production of fine filaments for spun bond nonwovens with superior mechanical strength. With MFR 36 g/10 min (2.16 kg/230°C), *Moplen* HP561S HP is formulated with an anti-gas fading stabilization package.

**Moplen HP554M, HP552N, HP552R**

These homo-polymer grades are formulated with an anti-gas fading stabilization package and are used for the production of staple fibers and continuous filaments. *Moplen* HP554M is suitable for the production of staple fibres with high thermal-bonding strength.

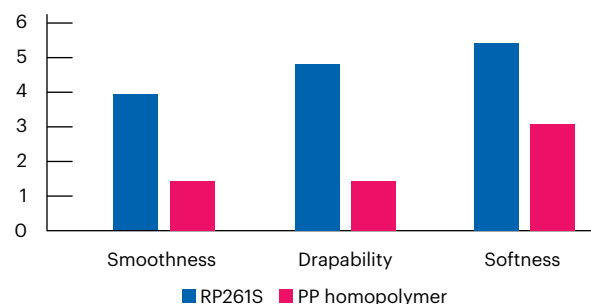
Outstanding softness with *Moplen* RP261S

Moplen RP261S is a new polypropylene copolymer with MFR 30 and a very narrow molecular weight distribution.

Moplen RP261S is formulated with an anti-gas fading stabilization package and is developed for the production of spunbond nonwovens and continuous filaments with very high softness and very high flexibility.

Moplen RP261S significantly advances the softness and comfort of polypropylene textiles.

Haptics panel evaluation (Internal method)

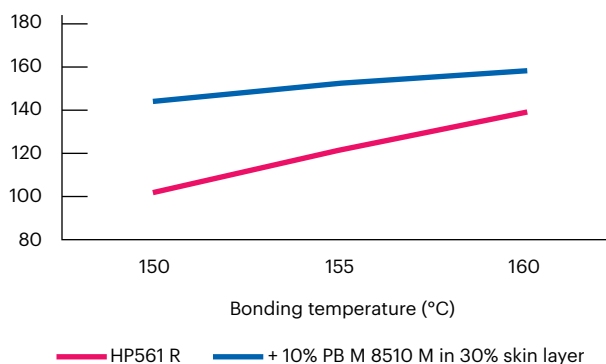


Improved nonwoven tensile strength by adding Polybutylene-1

Polybutylene-1 (PB-1) grades are the latest member of our polyolefins family. The extra methyl group present on the Butene-1 monomer compared to the Propene-1 makes PB-1 compatible with polypropylene but incompatible with polyethylene. The incompatibility between PE and PB-1 is used in seal-peel and re-closable applications in flexible packaging while PB-1 is used as sealing booster in BOPP packaging films. Similarly adding only 3% of *Koattro* PB M 8510 M into PP increases the sealing strength of PP filaments and the resulting nonwoven tensile strength.

Other applications of PB-1 grades in textile applications include the production of mono-material and recyclable polyolefin carpets where our very soft *Koattro* PB M 1200 M is extruded along with CaCO₃ to form the carpet backing replacing latex or bitumen.

50 g/m² NW tensile strength MD (N/5cm)



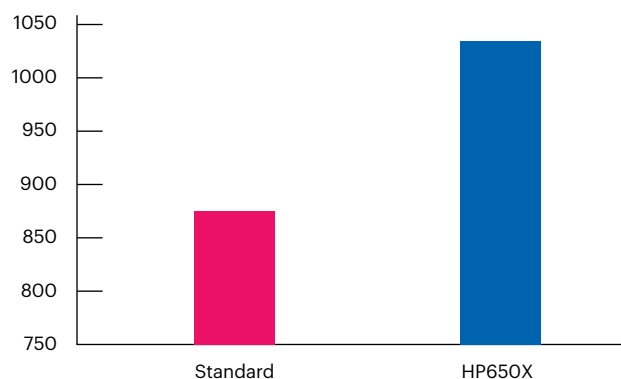
Microfilaments

LyondellBasell has a wide range of very high-fluidity grades that are successfully used by customers for the production of melt blown nonwovens and for compounding applications.

Moplen HP560W (MFR 450*) / *Moplen* HP560X (MFR 800*) / *Moplen* HP560Y (MFR 1200*) *) / *Moplen* HP560Z (MFR 1500*)

These *Moplen* grades are setting new references in terms of processing and performance. The very narrow molecular weight distribution (MWD) of our grades allows filament diameter to be reduced by up to 20% compared with standard grades. The resulting finer filaments can deliver a markedly improved barrier performance (increased hydro-head and reduced air permeability) as well as soft-touch characteristics that add value to sanitary and filtering products. The use of the latest generation of *Avant* Ziegler/Natta non-phthalate catalyst opens the door for a range of applications that require the purest of polypropylene grades.

Hydrohead (mm) 20 g/m² fabrics



* g/10 min (2.16 kg/230°C)

Main product portfolio

Properties	MFR [g/ 10'] 230°C/2,16 kg	Additivation	Features/application
Polypropylene staple fibers - CF/BCF			
Moplen HP452J	3,4	AGF	Staple fibers
Moplen HP552K	4	AGF	Staple fibers
Moplen HP552L	6	AGF	Staple fibers
Moplen HP554M	11,5	AGF	Thermal-bonding staple fibers
Moplen HP552N	13	AGF	Staple fibers
Moplen HP552R	25	AGF	Staple fibers
Moplen RP261S	30	AGF	High softness
Polypropylene spun bond - POY - HTY			
Moplen PP567P	18	AGF	Narrow MWD for spun bond, HTY
Moplen HP561R	25	AGF	Narrow MWD for spun bond, HTY
Adflex Z101H	27	AGF	In-blend for enhanced softness
Moplen RP261S	30	AGF	Narrow MWD, High softness
Moplen HP561S	32	AGF	Narrow MWD for spun bond, POY
Moplen HP561S HP	36	AGF	Narrow MWD for spun bond, POY
Polypropylene melt blown			
Moplen HP560W	450		Very narrow MWD
Moplen HP560X	800		Very narrow MWD
Moplen HP560Y	1200		Very narrow MWD
Moplen HP560Z	1500		Very narrow MWD

Properties	MFR [g/ 10'] 190°C/ 2.16 kg	Density [g/cm³]	Additivation	Features/Application
Polybutene-1				
Toppyl PB 8310M	3,5	0,897	Antioxidant	Filaments
Koattro PB M 8510 M	45			Filaments
Koattro PB M 1200M	1200	0,908	Antioxidant	Melt blown, Carpet backing

AGF - Anti-Gas Fading
 HTY - High Tenacity Yarn
 POY - Partially Oriented Yarn

MFR - Melt Flow Rate
 BCF/ CF - Bulk Continuous/
 Continuous Filament

MWD - Molecular Weight Distribution
 WCO - Water Carry Over
 FRR - Flow Rate Ratio



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About us

We are LyondellBasell (LYB) – a leader in the global chemical industry creating solutions for everyday sustainable living. Through advanced technology and focused investments, we are enabling a circular and low carbon economy. Across all we do, we aim to unlock value for our customers, investors and society. As one of the world's largest producers of polymers and a leader in polyolefin technologies, we develop, manufacture and market high-quality and innovative products for applications ranging from sustainable transportation and food safety to clean water and quality healthcare. For more information, please visit www.lyb.com or follow [@LyondellBasell](https://www.linkedin.com/company/lyondellbasell) on LinkedIn.

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