

CHEMISTRY THAT MATTERS™



# CREATING COMFORT WITH HIGHER EFFICIENCY

MATERIALS FOR PERSONAL AND PROFESSIONAL HYGIENE  
APPLICATIONS TO SUPPORT CONSUMER WELL-BEING









---

## INCREASING FUNCTIONALITY REDUCING COMPLEXITY

SABIC IS A STRATEGIC SOLUTION PROVIDER FOR NON-WOVENS WITH NEW MATERIAL TECHNOLOGIES THAT CAN ENABLE THE INDUSTRY MAKE LIGHTER, SAFER AND FUNCTIONAL PERSONAL AND PROFESSIONAL HYGIENE APPLICATIONS THAT ARE MORE EFFICIENT, COMFORTABLE AND SUSTAINABLE.

Innovating with customers to enhance performance and sustainability. This is “Chemistry that Matters™”.

---



# GLOBAL TRENDS

Increased awareness about personal hygiene, growing population, growing number of women workforce, and aging are the key growth drivers for the global personal hygiene market. The growing population in developing countries, such as China and India is a major driving force for the demand of baby diapers, which is influencing the growth of the Asia-Pacific market.

Due to the growth of aging population, which is expected to reach 2 billion by 2050 according to the United Nations report\*, the use of adult incontinence products are also increasing. As the per capita income of consumers is increasing, the consumers are spending more on the personal and baby hygiene. Good hygiene is important to prevent many infectious diseases, and promotes better health and well-being.

Hygiene industry is focusing more on how to deliver the performance and improve functionalities of non-wovens such as purity, softness and moisture absorption to support consumer wellbeing, convenience, compliance with hygiene regulations, and cost efficiency.

\* UN DESA report, "World Population Prospects: The 2015 Revision"

## UNLOCKING OPPORTUNITIES

It is important for suppliers like SABIC to engage with value chain partners on industry trends, support OEM's and converters with their challenges in compliance with hygiene regulations, increased functionality and cost efficiency.

SABIC has a team of experts dedicated to hygiene applications with polymer portfolio that is designed to cater needs of our customers in the industry. This is part of our strategy to effectively support customer's need for innovation, service and application development - based on their global and local requirements.

Meeting these challenges is fueled by our vision to become the world leader in chemicals: we will achieve this by collaborating with our customers, helping them achieve their ambitions.

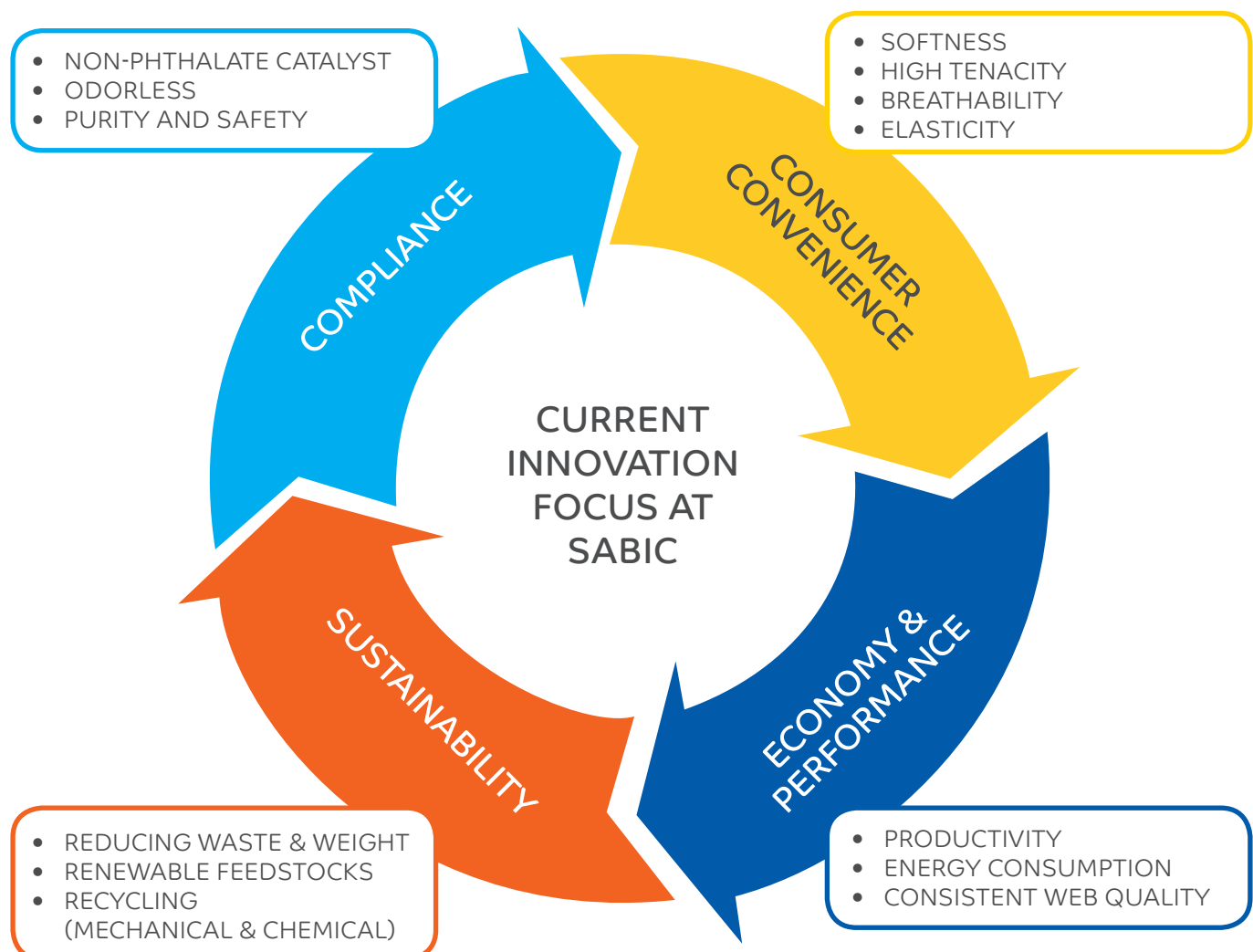






# TYPICAL INDUSTRY TRENDS

Hygiene industry is a very demanding market in terms of both technical performance and other properties of non-wovens such as softness, pureness and moisture absorption. For applications in which non-wovens are used, whether baby care, feminine hygiene, adult incontinence, medical disposable surgical gowns (scrub suits), performance can be driven by the correct material selection. The personal hygiene industry is constantly seeking advanced material solutions helping manufacturers to push the limits of consumer safety and convenience, function, sustainability and cost control.

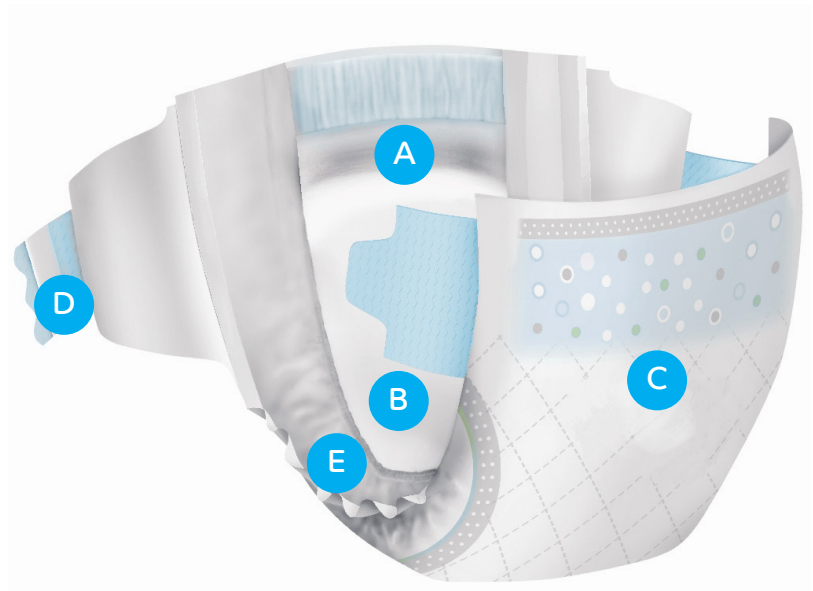




# PHTHALATE-FREE TECHNOLOGY FROM SABIC

The modern baby diapers and incontinence products have a layered construction, which allows the distribution and transfer of fluids to a penetrable core structure, where it is locked. Baby diapers provide hygiene, cleanliness, and comfort.

SABIC® PP product portfolio is based on phthalate-free technology that offers very good processability for fibers with high levels of uniformity. The resulting non-wovens are developed to combine high barrier properties and absorption with breathability in thin and lightweight high-performance webs of enhanced conformability and reduced material consumption.



## A: TOP SHEET

SABIC® PP FOR NONWOVEN PRODUCTS STRUCTURE (SMS/SMMS\*) CAN BE AN EXCELLENT CANDIDATE

This layer offers soft, comfortable feel against the skin and meets stringent quality and safety standards.

## B: ACQUISITION LAYER, E.G. BARRIER LEG CUFF

SABIC® PP FOR NONWOVEN PRODUCTS STRUCTURE (SMS/SMMS\*) CAN BE AN EXCELLENT CANDIDATE

An open structure to quickly transport fluids away from the skin.

## C: BACKSHEET

SABIC® PP NONWOVEN LAMINATED PRODUCTS WITH PE-FILMS CAN BE AN EXCELLENT CANDIDATE

Outside layer of the application usually consist of a waterproof film-based product to ensure there is no leakage out of the product. Some applications include a breathable film for increased skin comfort. Additionally, some products come with printed design and graphics.

## D: FASTENERS

These stretchable, easily opened and refastened strips help secure the application around the baby or adult and give a comfortable fit.

## E: ELASTICS

These elastic parts are located around the waist and legs help for comfortable fit and prevent leakage.

\*S: SPUN-BOND, M: MELT BLOWN





# SABIC SOLUTIONS

## SABIC® PP-FIBER GRADES FOR LIGHTWEIGHT, NON-WOVEN FABRICS IN HYGIENIC APPLICATIONS

- Can be processed in existing extrusion equipment without significant modifications
- Help achieve very good fiber thickness uniformity
- Made with phthalate-free catalyst technology and available globally.

## NEW DEVELOPMENTS

- Functionality, consumer convenience and comfort, e.g.:
- Soft touch
- High tenacity
- Breathability
- Melt blown (mb)

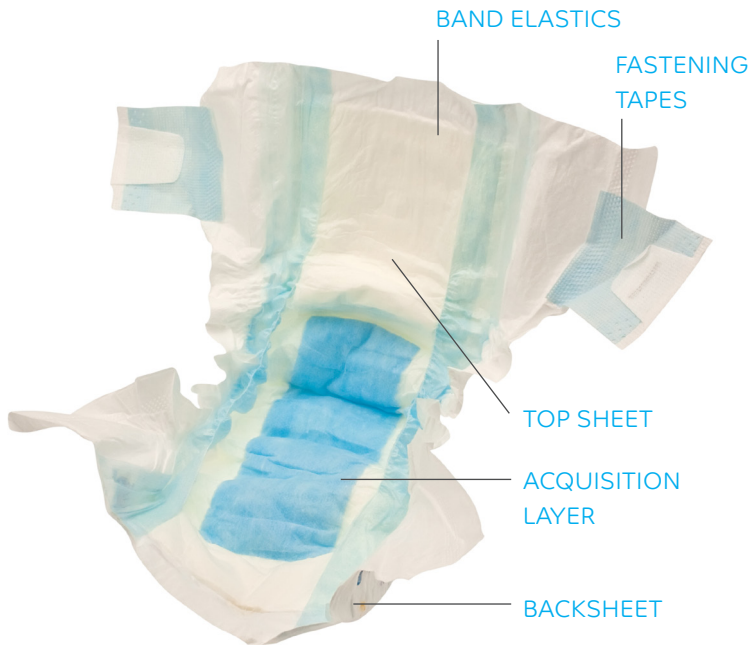
## SABIC PRODUCT PORTFOLIO FOR NON-WOVENS USED IN HYGIENE APPLICATIONS

All products are available globally.

	Grade	Process	MFI* (g/10 min)	Density (g/cm <sup>3</sup> )	Characteristics
SABIC® PP HOMOPOLYMER	510A/510P	Staple fiber	10-12	905	<ul style="list-style-type: none"> <li>• Anti gas fading stabilization (Broad Molecular Weight Distribution)</li> </ul>
	511A	Spunbond	25	905	<ul style="list-style-type: none"> <li>• The narrow molecular weight distribution</li> <li>• Anti gas fading stabilization package</li> </ul>
	519A	Spunbond	35	905	<ul style="list-style-type: none"> <li>• Very good balance of mechanical properties and softness</li> <li>• Very narrow molecular weight distribution</li> <li>• Anti gas fading stabilization package</li> </ul>
	514M12	Meltblown	1200**	905	<ul style="list-style-type: none"> <li>• Very narrow molecular weight distribution</li> <li>• Made with odor-free technology without peroxides</li> <li>• Provide enhanced nonwoven barrier properties</li> </ul>

\*Melt flow rate measured at 230°C under a load of 2.16 kg

\*\* Melt flow rate of meltblown fabric processed at 275-300°C



### FILMS AND LAMINATES

- Back sheets breathable film
- Elastic films for back sheets
- Laminates
- Top sheets
- Perforated films for top sheets

### SABIC PRODUCT PORTFOLIO FOR FILM & LAMINATES USED IN HYGIENE APPLICATIONS

	SABIC® HDPE POLYMER	SABIC® LDPE POLYMER	SABIC® LLDPE POLYMER	SABIC® C8 M-LLDPE POLYMER	SABIC PLASTOMERS	SABIC® PP POLYMER
Grades	F04660	2101N0W	118NJ	8112	8102 /L	526P
	F0863	2201H1W	218NJ	8112L	8402	621P
	M80064	2602H0W	6118	8115	8600X	
				8115L	8170D	
				7118NE	8570D	
				8315	8185	
				7318BE	8380	
				S100		

**Note:** These are just few examples of SABIC’s PE-grades. For specific grade selection please contact SABIC technical team.

# COLLABORATION ACROSS THE WORLD

As a strategic supplier of new material solutions to the industry, we are committed to making a significant contribution to the success of our customers by constantly raising the bar of quality and performance, ensuring long-term dependability and building valuable relationships to leverage mutual growth opportunities.

Having a new global segment organization for the Personal Hygiene segment with polymer portfolio that is designed to cater needs of our customers in the industry, is an evidence of SABIC’s commitment to the customer driven strategy and industry focus to effectively support their needs for innovation, service and application development around the world.







# CARING FOR THE FUTURE

SABIC offers PP and PE polymer solutions for personal and professional hygiene applications, which can help to support consumer well-being and convenience, compliance with hygiene regulations, increased functionality and cost efficiency.

We push the limits of quality, efficiency, and performance to drive customer success in personal hygiene segment with our material solutions for the non-woven and hygiene film applications.



---

# CONTACT US

## SABIC Headquarters

PO Box 5101  
Riyadh 11422  
Saudi Arabia  
T +966 (0) 11 225 8000  
F +966 (0) 11 2259000  
E [info@sabic.com](mailto:info@sabic.com)

## EUROPE

### SABIC Europe Head Office

PO Box 5151  
6130 PD Sittard  
The Netherlands  
T +32 (46) 722 2222  
F +32 (46) 722 0000  
E [info@sabic-europe.com](mailto:info@sabic-europe.com)

## ASIA PACIFIC

### SABIC Asia Pacific Head Office

One Temasek Avenue  
#06-01 Millenia Tower  
Singapore 039192  
T +65 6557 2555  
F +65 6531 8101  
E [info@sabic.com](mailto:info@sabic.com)

### SABIC (Shanghai) Trading Co. Ltd.

2550, Xiupu Road Pudong  
Shanghai 201319  
China  
T +86 21 2037 8188  
F +86 21 2037 8288

## UNITED STATES

### SABIC Americas Head Office

Suite 650  
2500 City West Boulevard  
Houston, TX 77042  
USA  
T +1 713 532 4999  
F +1 713 532 4994  
E [info@sabicamericas.com](mailto:info@sabicamericas.com)

SABIC's app - the Polyolefins Product Finder. Contains all material solutions information for the European market.

DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES ("SELLER") ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER'S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller's materials, products, services or recommendations for the user's particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right. SABIC and brands marked with <sup>TM</sup> are trademarks of SABIC or its subsidiaries or affiliates.

© 2018 Saudi Basic Industries Corporation (SABIC). All Rights Reserved.

† Any brands, products or services of other companies referenced in this document are the trademarks, service marks and/or trade names of their respective holders.