

Synthetic Rubbers Never Far Away from You –





# KINNOVATION





Synthetic Resins Leading vs. Winning

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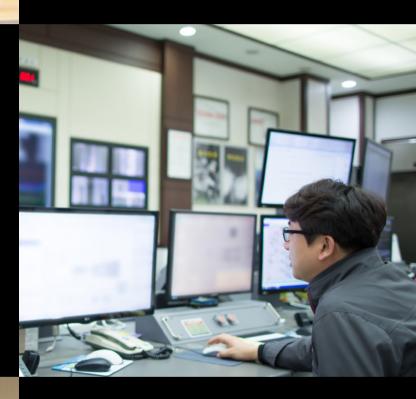
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## Synthetic Rubbers

Starting out as Korea's first producer of synthetic rubbers, we have grown to become one of the world's largest producers of BR (butadiene rubber) and SBR (styrene butadiene rubber). Today, we continue to improve the key properties of our products as we work to expand their range of industrial applications. Our completion of an NB (acrylonitrile butadiene) latex capacity expansion project in 2016 will further cement our position as an industry leader, enhancing our competitiveness as we boost sales of more profitable NB latex and expand our product portfolio in areas such as SSBR (solution styrene butadiene rubber) and NdBR (ultra high-cis polybutadiene rubber).





Our high-performance synthetic rubber products are used by major tiremakers around the globe

## Our innovation is steadily expanding our scope of business through ongoing investments focused on strengthening our product portfolio.

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@ Yeosu Synthetic Rubber Plant I

## to continually elevate the quality of life, bringing greater convenience and safety to your world.



How much do you know about KKPC? Do you know what we make? How about what technologies we have or what our major products are? You may not know that much about us, but if you are like most people, you will be surprised when you realize how frequently our paths cross. That's because you never have to look far to find us in everyday life.



We strive to consistently deliver the highest quality synthetic rubber products to our customers.



We are a top-tier global synthetic rubbers maker with a production capacity of 1,464,800 mtpy.



### Spending more time with you

Imagine yourself driving to a country club to play a round of golf with some business associates on the weekend. You might not realize it now, but you will be spending more time today with us than with anyone else. Take your car for instance. You'll find KKPC synthetic rubber products in a large number of components, from the tires to engine hoses and belts. The same goes for the golf shoes that help you navigate the course and even the golf ball that you send flying toward the cup.

### Paving the way for progress

Our diverse range of synthetic rubbers is used in far more places than you might imagine. For instance, you'll find our technology inside the asphalt roads you drive on. Over the years, we've improved the properties of our SBS (styrene butadiene styrene) thermoplastic elastomer, enhancing the strength and service life of asphalt roads for safer driving. That's just another example of how our synthetic rubbers are enhancing the quality of life, making every part of life more convenient and safer.





## Synthetic Resins

Becoming a global player in the synthetic resins industry is another one of our key objectives. Aiming for a larger share of the Chinese market, we recently invested KRW 53 billion to expand our ABS (acylonitrile butadiene styrene) production capacity, completing our third plant in that major market. As Korea's leader in resin production technology, we have developed Enerpor EPS (expandable polystyrene) resin, a highperformance product that delivers energy savings that will significantly reduce CO<sub>2</sub> emissions. Through these and other ongoing efforts, we continue to strategically diversify investment to strengthen both product and corporate competitiveness.





Our high-quality synthetic resins enable designers to create home appliances that have both exceptional form and functionality. Our innovation is creating new markets by anticipating the needs of our customers and developing highly competitive products to meet them.

@ Ulsan Synthetic Resin Plant

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## Leading vs. Winning

At KKPC, we are more interested in being a leader than simply being a winner. A winner might be the best for a moment, but a leader gives 100% all the time. A winner may have a huge lead, but a leader brings everyone along with them. A winner is satisfied with today's successes, but a leader thinks about long-term value. Over the years, we have played a leading role in Korea's industrial development by producing commodity resins for industrial and consumer applications. This is the kind of leadership model we intend to build on globally going forward.



Our ABS resins are available in a wide selection of grades for a diverse spectrum of products ranging from automobile parts and home electronics and appliances to everyday items.



We are a global synthetic resins maker with a production capacity of 846,000 mtpy.





## Bringing more convenience and comfort to life

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Our broad synthetic resins product portfolio continues to grow year by year. Our ABS is used in automobiles and home appliances. Our PS is used in everyday goods and electronic components. Our EPS is used in packaging and construction materials. Our PPG is used to produce polyurethane for use in a variety of cushioning and cold insulation materials. In short, our growing family of resins is a key part of the essential products that are bringing more convenience and comfort to life.

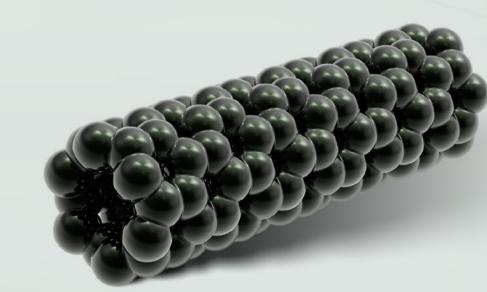


### Creating a lasting legacy

While the theme of the chairman's 2016 corporate new year's address focused on making a new start, his comments about leaving a legacy made a particularly strong impression. He was talking about the value of sharing with all and passing that on to the next generation, echoing the founder's counsel to live with integrity to others. This leader's mindset is why we are committed to leaving a great legacy for tomorrow's industries built on a dedication to ceaseless research and innovative product development.

## Carbon Nanotubes

CNT (carbon nanotubes) are one of the most promising innovations in nanomaterials development, boasting 100 times the tensile strength of steel and 1,000 times the electrical conductivity of copper. Our successful commercialization of CNT technology puts us on the cutting edge of industrial materials innovation. We are now hard at work developing next-generation materials that will exceed customer expectations, opening the door to new markets and driving growth.



Our carbon nanotube technology has the potential to deliver major performance improvements for our synthetic rubbers and synthetic resins in the coming years. Our innovation is actively driving the development of growth engines through ongoing R&D aimed at perfecting the products customers want.

@ Asan Electronic Materials Plant



## OLED Panel Sealant

Without exception, each and every one of our products takes the same path from concept to reality. That difficult and challenging path can be summarized as never-ending research and never-satisfied development. In 2016, our electronic materials business became the first in Korea to commercialize production of an OLED panel sealant, a success made possible by taking a greater, more innovative path than the rest.



We are developing and delivering highquality sealants to meet the evolving needs of the OLED panel industry.

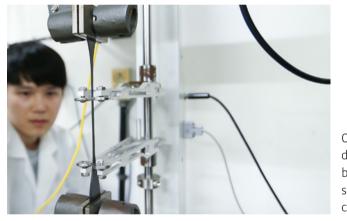


Our innovation is moving forward toward change and growth, driven by an enterprising research mindset and a passionate commitment to development.

@ Asan Electronic Materials Laboratory

## Focusing on What Comes Next

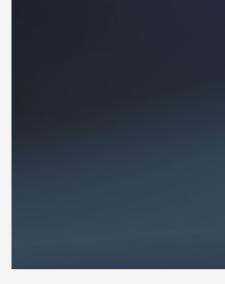
At KKPC, the reason we exist today is because of the research and development that has enabled us to upgrade our core products and diversify our portfolio over the years. Talking about R&D is easy, but actually doing it is another matter. Our success here is what differentiates us and makes us strong as we pursue and deliver innovation across our organization.

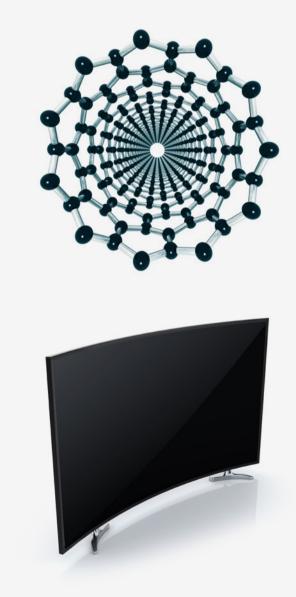


Our research and business development efforts are driven by a staff of approximately 200 specialists spanning the fields of chemicals and materials.



We invested over KRW 34 billion in 2016 to improve the performance of existing products and develop new value-added products with the potential to drive future growth.







### Taking product performance to the next level

Carbon nanotubes are extremely versatile materials. Although they have outstanding properties of their own, when combined with other materials, their strength can double. When our existing synthetic rubbers and synthetic resins products and CNT technology come together, dramatic improvements in durability, thermal conductivity, electrical conductivity, and other properties are possible. We continue to explore the vast range of possibilities as we systematically identify opportunities to drive future growth.

### Making Korean display makers more competitive

Our greatest achievement in the electronic materials field in 2016 was the development of a sealant for OLED panels. Since developing Korea's first commercial sealant for the small and medium OLED panel market in 2012, we have strategically expanded our sealant lineup to include products for the latest OLED panel segments. By leveraging our expertise to deliver Korea's first OLED panel sealant, we have once again reaffirmed our leadership in the display sealant field.

## world where humanity protects preserves humanity.



Putting the environment first is the heart of our environmental, health, and safety philosophy, anchored by our vision to be a company that creates the future by meeting the needs of humanity and the environment. In recent years we have put in place an independent environmental management system, upgraded our safety management system and training, and implemented an emergency response system that aims to minimize our environmental impact and reduce safety accidents to zero.



KCMS

Our new chemical management system (KCMS) significantly enhances our ability to systematically monitor and manage chemical substances at our production sites across Korea.



### Making the future safer and greener

In our unwavering pursuit to make the chemical industry more eco-friendly, we have set mid- and long-term goals and are now moving forward with a number of focused initiatives. In 2016, we upgraded our EHS (environmental, health, and safety) policies as we implemented a new chemical management system that has upgraded our review and monitoring of chemical substances to the next level. As part of our carbon emissions and energy consumption reduction targets, we also replaced all lighting fixtures at all worksites with energyefficient LED fixtures as we continued to do our part to create a safer, greener future.

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### Putting safety first

As evidenced by our steadily rising investment in safety, we believe that safety is something than can never be emphasized enough. Our CEO-led organization-wide safety management system plays the lead role in creating an accident-free workplace. In March 2016, our Yeosu plant set a new internal corporate record for safety performance, a record it continues to extend to this day. This is the kind of safety performance that we strive for across our organization every day of every year.

## Workplace Excellence

In our quest to become a global leading chemical company, we are looking for people who aspire to be global leaders. We want people who are open to collaboration. People who take responsibility. People with passion who never give up. And people who innovate as they pursue creative change. These are the kind of people that will help us lead the way in global markets in the coming years.









Our human resources strategy focuses on hiring and cultivating global-minded people as we pursue our vision of being a global leading chemical company.



## Cultivating an Innovative Future

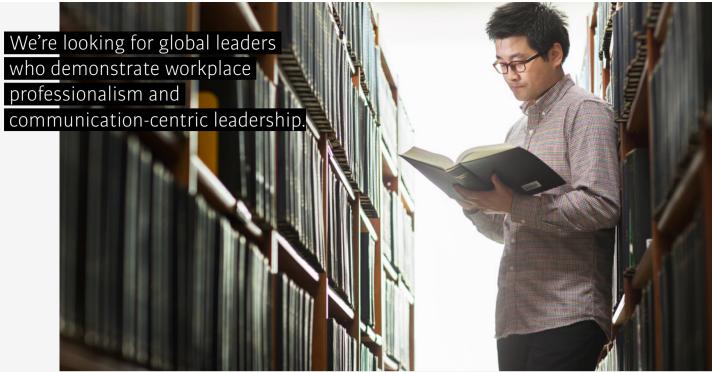
Behind every successful organization you'll find successful people. That's why we value our people and actively invest large amounts of both time and money to help them achieve their full potential. Our human resources management program is a case in point. We believe that cultivating professionalism and leadership across our workforce will enable us to reach higher and further both today and tomorrow. For us, the ultimate, most forward-looking innovation is people.



We encourage our people to enhance their skills and capabilities by covering costs related to earning governmentrecognized professional certifications.



Our in-house lecturer development program is helping us tap into the wealth of expertise we already have to boost institutional know-how.





### Raising the standard for professionalism

One of the HR initiatives we have operated since 2010 to cultivate entrepreneurial global leaders is a program designed to encourage our people to acquire governmentrecognized certifications in professional fields. During the past five years, they have earned a wide range of certifications such as certified US public accountant, financial risk manager, certified financial analyst, production and inventory management specialist, and project management specialist. We also operate an in-house lecturer development program that helps grow institutional know-how by tapping the expertise of employees with more than five years of experience in 14 core job positions spanning the production, quality, and the environmental fields.

### Mentoring the future

We operate a mentoring program for new employees to help them successfully settle into company life. Each new employee has two mentors during their first year on the job. During the first six months, they have an assigned mentor. For the latter six months, they have the opportunity to choose their own mentor. We also hold mentoring workshops to help mentors and mentees build rapport and ensure that the mentoring experience meets its objectives. In these and many other ways, we are empowering our people to expand their individual skills and capabilities, ultimately enhancing our organizational capabilities in the process.

### Fostering leadership skills

"Leadership" is another key word in our HR management strategy. We support a variety of experiences to help our people develop their communication, thinking, and decision-making skills. The best example is our Wink Talk program, which invites outside experts such as artists, writers, and academics to talk about current issues from culture and the arts to the latest topics in management such as "big data". We also operate a number of programs for managers at the team leader level and above that actively support proactive self-development through annual goalsetting, daily self-study, and book reading relays.

## **Kumho Petrochemical Personnel System**

ABILITY Salaries reflect employee ability

PERFORMANCE Incentive system rewards both individual and corporate performance

ROTATION Job rotation provides career development opportunities

