

#### Key Figures

	2012	2011
Share Data		
Number of Shares	33,491,177	33,491,177
Common Shares	30,467,691	30,467,691
Preferred Shares	3,023,486	3,023,486
Market Capitalization in KRW Millions	4,061,598	5,223,522
Credit Rating from Korea Information Service	A-	BBB+
Per Share Data (in KRW)		
NetIncome	4,959	24,723
Book Value	62,217	58,199
Dividend	2,000	2,000
Share Price		
Year-End	130,500	167,500
High	181,500	253,000
Low	96,800	90,200
Shareholder Structure		
Major Shareholders	23.87%	23.65%
Free Float	41.23%	41.45%

### KKPC Stock Price vs. Key Indexes





# **Research & Business Development**

At KKPC, we know that our future is riding on the competitiveness of our products, technologies, and processes. Today, we are working hard to ensure that our R&D advances add to our bottom line through organic collaboration between production, research, marketing, and all other areas of our operations as we deliver greater value to our customers.

#### **R&BD** Organization

We refer to our R&D activities as "R&BD" or research and business development to reflect the common sense idea that business strategy as well as potential market needs must be taken into account from the R&D planning phase to ensure that each project makes a concrete contribution to corporate strategy. We have created an environment that facilitates deeper collaboration by building a research ERP system that integrates with our corporate ERP system. Our R&BD activities revolve around the Kumho Petrochemical R&BD Center in Daejeon, which focuses on the fields of synthetic rubbers, synthetic resins, and next-generation materials, and the Kumho Electronic Materials Laboratory in Asan, which focuses on advanced, value-added materials for the infotech sector.



Kumho Petrochemical



# Major Innovations

# SBR Grade Diversification

With the eco-friendly tire market on the rise and tire labeling requirements becoming increasing common, demand for solution styrene butadiene rubber (SSBR) is growing rapidly. In response, we have developed new compounds and proprietary polymer structure control technologies that enable us to develop and produce unique SSBR grades with superior mechanical properties and silica filler dispersion characteristics.

#### igh Tensile Strength NB Latex

Medical glove makers are always looking for ways to create lighter gloves to improve quality and competitiveness. However, thinner gloves are harder to manufacture and have a more difficult time to pass safety standards in developed markets such as the US and Europe. We have developed and are now producing a high tensile strength acrylonitrile butadiene latex that is more than 10% stronger than existing grades as well as having excellent processability, winning accolades from our customers.





Although 6PPD is a widely used antioxidant with good resistance to ozone and excellent antioxidant performance in a bent state, it is highly toxic to aquatic life and has a browning effect when used in tires. In contrast, bis (alkylamino) diphenylamine (BAADA) has excellent resistance to ozone and cracking with less aquatic toxicity and no browning effect. We have completed development of a BAADA antioxidant and are now in the process of optimizing the lab production process.

#### igh Transparency SAN Resin

Acrylonitrile is used to increase the strength of high-rigidity SAN resins, but it has a yellowing effect. Specialized dying techniques are needed to convert the resin into a clear material and trace amounts of acrylonitrile must be removed to create a material suitable for food storage containers. We have created a proprietary vaporization process that enables us to produce a strong, highly transparent SAN resin that is suitable for food container use as well as cosmetics cases and a wide variety of other applications where clear containers are desirable. igh-Density Carbon Nanotube Technology Carbon nanotube fine particles are extremely low in density, posing toxicity issues in humans if inhaled as well as workability challenges in manufacturing. We have developed a simple proprietary process to produce a high-density powder that gives us a competitive edge in the marketplace. We plan to begin mass production in the second half of 2013.

### rF Photoresist

Argon fluoride (ArF) photoresist is a highperformance value-added material for making extremely small nanometer-scale patterns in the semiconductor photolithography process. In 2006, we completed development of our ArF photoresist entirely with in-house technology and began mass production. In 2012, we completed development of an ArF immersion photoresist and are now in the process of bringing it to market.

#### ouchpanel Functional Coating Materials

Over the years, we have used our expertise in organic compounds to develop and bring to market a variety of UV-cured transparent liquid coating materials for use in the display and electronic materials fields. We are now leveraging this expertise to bring to market coating materials for the fast-growing touchsceen display segment as we push forward with development of highly-functional coating materials suitable for the larger touchscreens that are beginning to come to market.



# T-SOC Hard Mask Hot-temperature spin-on carbon (HT-SOC) is a high-value-added high-carbon organic compound with applications in semiconductor photolithography. In 2012, we developed an HT-SOC material and filed four related patent applications. The material is now undergoing technical evaluation by a number of customers and we expect to launch mass production in 2013.

#### hotosensitive Polyimide

Photosensitive polyimide (PSPI) is an exceptionally reliable protective packaging material applied above the semiconductor passivation layer to protect chips from heat, moisture, and foreign substances. In 2012, we completed PSPI development and began preparations to bring it to market. We continue to work on performance enhancements as we prepare to enter this market currently dominated by Japanese suppliers.