

## Evonik in North America

North America is a massive market with enormous economic power. In 2009, the region—comprising the US, Canada and Mexico—had more than 400 million residents and a gross domestic product (GDP) of over US\$17 trillion, making it the world's leading economy, ahead of the European Union. North America has been a free trade zone since the early 1990s, when the North American Free Trade Agreement (NAFTA) was signed. Trade between the signatories to this agreement accounts for a high proportion of business in the NAFTA zone. Other major trading partners are Japan, China and Germany. The US has rebounded from the severe recession, which started in the 2008 second quarter, and the world's largest economy is now growing again. The same is true with Canada and Mexico, where the sharp rise in income from oil exports is also having a positive effect.

Evonik's sales in North America<sup>1)</sup> contracted by 18 percent to €1,897 million in 2009, mainly due to the cyclical downturn. The region's share of total sales remained unchanged at 14 percent. Today, we have around 4,100 employees in North America. Our presence in this region focuses on the chemicals industry, where we are one of the leading suppliers.

North America is one of the "home bases" for our Chemicals Business Area; all major activities have been firmly established in this region for many years including hydrogen peroxide, silicas, carbon black, superabsorbents, feed additives, isophorone and high-performance polymers. Our North American subsidiary Evonik Degussa Corporation is headquartered in Parsippany, New Jersey.

Our first production facilities were established in North America in the early 1970s. Today, Mobile, Alabama, is Evonik's largest site in North America. At Mobile, around 650 employees manufacture a broad range of products including hydrogen peroxide, DL-methionine for animal feeds, fumed silicas, silanes, alcoholates for the production of biodiesel, and the polymethacrylimide rigid foam ROHACELL®. The majority of in-house services for Evonik's entire region are also located at this site.

Our Consumer Specialties Business Unit produces superabsorbents and ingredients for the cosmetics industry at facilities in Greensboro, North Carolina, Mapleton, Illinois, and Hopewell, Virginia. Superabsorbents are crosslinked polymers produced from acrylic acid which form a gel that can absorb up to 300 times its weight in liquid and retain it even under pressure. They are used in diapers, feminine hygiene products and incontinence products.

Evonik has gradually increased its position in North America in recent years. In 1998, we established Midwest Lysine as a joint venture with Cargill to produce the essential amino acid L-lysine. In 2003, we acquired Cargill's shares in this joint venture as a key step in strengthening our feed additives business. Evonik produces L-lysine on a site adjacent to Cargill's production facility in Blair, Nebraska, which supplies one of the key starting

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<sup>1)</sup> Evonik defines the North America region as the USA, Canada and Mexico.

products: starch sugar. Evonik is the world's only single-source supplier of all four important amino acids used in animal feeds: DL-methionine, L-lysine, L-threonine and L-tryptophan.

In 2005, we acquired the 50 percent stake in Cyro Industries previously held by our joint venture partner, Cytec, and thus strengthened our position as the world's leading supplier of methylmethacrylates (MMA) and specialty monomers and polymers. Cyro has production facilities in Wallingford, Connecticut, Fortier, Louisiana, Osceola, Arkansas, and Sanford, Maine. Following acquisition of the shares, MMA production capacity in Fortier was rapidly increased. MMA and specialty monomers are building blocks for a wide range of applications such as non-scratch coatings, high-quality adhesives and modern automotive trims. Evonik sells its polymethylmethacrylate products under the ACRYLITE® trademark in North America. In other regions they are marketed as PLEXIGLAS®.

Two years later, we acquired the remaining 50 percent stake in Degussa Engineered Carbons (DEC) from our former joint venture partner ECI. This Parsippany-based joint venture, which was established in 2002, combined both partners' carbon black activities in North America. Integrating DEC strengthened our business with furnace carbon blacks for the rubber and pigment industries in North America and our global position in thermal carbon blacks. We rank second in the global market for carbon black.

ROHACELL® rigid polymethacrylimide foam is an attractive global growth business. The excellent mechanical and thermal properties of this material make it ideal for lightweight components for the aviation, aerospace and automotive industries. Uses include components for the Airbus A 380 and helicopter rotor blades. Production of ROHACELL® rigid foam in the US started in summer, 2008. Before that it had only been manufactured at our site in Darmstadt, Germany. Investment in the new facility in Mobile, Alabama, totaled some US\$10 million.

Evonik now also produces alcoholates in Mobile. These products, which are manufactured from sodium methylate, are used as catalysts in the production of biodiesel. Investment in this new 60,000 metric ton facility, which came into service at the end of April, 2009, was in the low double-digit million dollar range. Before that, these products had been manufactured solely at our site in Lülisdorf near Cologne, Germany. The new plant is in response to the forecast rise in demand for biodiesel in North America. Alternative forms of energy derived from renewable resources are becoming increasingly popular in the region. We are the global market leader with this special catalyst for the production of biodiesel. We offer customers a consistently high biodiesel yield. High-purity raw glycerin, a by-product of the production process, is marketed to the pharmaceutical, cosmetic and food sectors.

A milestone in the expansion of our presence in North America was the establishment of a base for our exclusive synthesis business: On January 1, 2010, we acquired the Tippecanoe Laboratories site in Lafayette, Indiana, with around 650 employees from the US pharmaceuticals manufacturer Eli Lilly and Company. At the same time we concluded a multi-year agreement to supply pharmaceutical active ingredients and intermediates to Eli Lilly.

Exclusive synthesis of custom-tailored active ingredients and intermediates for the pharmaceuticals industry is a relatively non-cyclical business in an exceptionally high-growth market. To improve cost-efficiency, many pharmaceutical companies outsource parts of their production chain to specialists. Evonik's production network also includes sites in Hanau, and Dossenheim (Germany), as well as Nanning (China). For this reason we are able to offer our customers' solutions tailored specifically to their needs.

Further, in spring, 2010 we acquired a controlling stake in the US silica producer Harris & Ford Silco LLC of Portland, Oregon. This start-up was subsequently renamed Evonik Silco Materials (ESM). Thanks to our enormous experience and expertise in silicon chemistry, we have established a significant position as a supplier to the high-growth semiconductor sector in recent years, for example, as a producer of fumed oxides marketed as AEROSIL® (silica) and AEROXIDE® (ceria, alumina). These products are used in chemical mechanical polishing (CMP) in the semiconductor industry. The acquisition of Harris & Ford Silco, which includes employees with more than 15 years experience in the manufacture of ultra-high purity colloidal silica (silica sols), makes Evonik an all-round supplier of particles for CMP applications. Silica sols are softer and rounder than AEROSIL® fumed silica, so the polishing of semiconductors is less abrasive. Experts are predicting above-average growth rates for silica sols in view of the trend to miniaturization in the semiconductor sector, which requires increasingly demanding polishing technology. Lucrative growth prospects are also seen in other markets in which Evonik is already successful, for example, the coatings industry.

To ensure profitable growth, Evonik focuses on innovation in North America as in other regions. We therefore have more than 20 alliances with universities in the region, including Columbia University in New York, for example. Along with our technical center in Piscataway, New Jersey, we operate centers in Hopewell, Greensboro, and Horsham, Pennsylvania. The Group has approximately 150 R&D employees in North America. "Evonik Meets Science" is a regular forum organized by the company as a platform for discussion between its in-house experts and leading research scientists.

The Energy Business Area has had a presence in the US since 1992. Its engineering services offer a broad range of specialized solutions to the large market for fossil-fuel power plants in the USA. These have to meet increasingly stringent statutory requirements, opening up new opportunities for our subsidiary Evonik Energy Services LLC, Kings Mountain, North Carolina, in the field of environmental technology. Its business activities include SCR technology to reduce nitrogen oxide emissions and retrofitting of flue gas desulfurization units and fly ash separators. The world's largest and most advanced regeneration unit for power plant catalysts came into operation at Kings Mountain in 2007. Power plants use large-scale catalysts to reduce nitrogen oxide emissions. However, these are exposed to a range number of problems including clogging, paralyzers and catalytic poisons. In the mid-1990s Evonik developed an innovative technology to regenerate catalysts instead of simply replacing them. This technology was refined in the US for use on the world market. Evonik now accounts for 25 percent of the US market for engineering services for coal-fired power stations. In view of the

enormous market potential in this country, the outlook for these operations is extremely promising.

North America will remain one of the world's most important economic regions for Evonik. We will continue to strengthen businesses in this region in which we rank among the market leaders and where we see prospects for profitable long-term growth.

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