Background Information



Ion Exchange Resins business unit (ION)

The Ion Exchange Resins business unit of specialty chemicals group LANXESS AG is one of the world's leading producers of ion exchange resins, adsorbers and functional polymers. For more than 70 years, the brand name Lewatit has been synonymous with premium products that have become successfully established in more than 500 applications. More than 20 percent of sales are achieved with products that are less than three years old.

Ion exchange resins are used to remove dissolved components from liquids. The first step in the process is to apply functional groups to small polymer beads. Placed in the liquid, these functionalized polymers adsorb specific anions or cations, and release others in exchange. Water treatment is the best-known and biggest field of application for ion exchange resins. In the households, such products are used among other applications to soften water. They ensure that the calcium ions responsible for water hardness are replaced by "soft" sodium ions.

High-performance ion exchange resins are also used in industry, for example in power plants. There, Lewatit is used in the production of high-purity water and steam in order to avoid incrustations and corrosion. This improves the efficiency, operating reliability, service life and safety of power plants.

For cleaning of industrial effluent and for treatment of groundwater, the removal of toxic ionic and non-ionic substances plays a key role. LANXESS has a range of special Lewatit resins that, thanks to their excellent selectivity, are able to remove, for example, heavy metal ions and organic pollutants from (waste)water and industrial effluent. Contaminants collect on ion exchange resins and adsorbers, and, in this way, can be reliably removed from water. This ensures that only contaminant-free water is discharged into the environment.

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A further field of application for ion exchange resins is in hydrometallurgy, where they are used in the treatment of metals such as gold, copper, nickel and cobalt in solution. Special grades have been developed to isolate these metals and clean the water.

lon exchange resins are also a well established and indispensable part of the food industry. The production of crystal sugar and liquid sugar syrup, for example, would be almost inconceivable without them. The resins allow the brown cane sugar to be turned into the popular white product – and also make sure that sugar tastes like sugar.

Other areas of application for LANXESS ion exchange resins include the beverage industry, catalysis in the chemical and petrochemical industries, semi-conductor production, metalworking, pharmaceutics and heterogeneous catalysis.

The Ion Exchange Resins business unit has also made a name for itself as a developer of innovative plant engineering – for example, modern countercurrent processes that have become the standard in industrial water treatment. In addition, LANXESS moved into membrane filtration technology. The company built a new production plant at its site in Bitterfeld where it manufactures membranes for reverse osmosis for water treatment. The membranes' chemical composition and structure make it possible to filter out substances such as nitrates, pesticides, herbicides, viruses, bacteria and the smallest particles. These products are sold under the brand Lewabrane.

The ION business unit is part of the LANXESS Performance Chemicals segment, which posted sales in fiscal 2010 of EUR 1,97 million. It is headed by Jean-Marc Vesselle.

Key brands

Lewatit and **Ionac**: Under these brands, LANXESS markets a wide range of ion exchange resins with many different fields of application. Monodisperse ion

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exchange resins, for example, have resin beads with particularly narrow size distribution and, compared with heterodisperse products, bring significantly improved efficiency. The new products of the membrane filtration technology are sold under the roof of the new **Lewabrane** brand.

Production sites:

Leverkusen, Bitterfeld (both Germany) and Jhagadia, India.

For more detailed information go to: http://www.lewatit.com

LANXESS is a leading specialty chemicals company with sales of EUR 7.1 billion in 2010 and currently around 15,800 employees in 30 countries. The company is at present represented at 46 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals.

Leverkusen, September, 2011 erb

Forward-Looking Statements

This news release may contain forward-looking statements based on current assumptions and forecasts made by LANXESS AG management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

Information for editors:

All LANXESS news releases and their accompanying photos can be found at http://press.lanxess.com. Recent photos of the Board of Management and other LANXESS image material are available at http://photos.lanxess.com. The latest TV footage, audiofiles and podcasts can be found at http://corporate.lanxess.com/en/media/audio-video/.

You can find further information concerning LANXESS chemistry in our WebMagazine at http://webmagazine.lanxess.com.

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