

## Seeing is believing:

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### **Chemical Solutions for Semiconductors**

Electronic materials

#### Chemical Solutions for Semiconductors – Electronic materials

For more than 30 years BASF is a reliable and strong partner in the world of electronic materials. BASF have an established track record in providing a wide range of process chemicals and solutions for semiconductors, flat panel displays, lighting such as LED as well as photovoltaics, including cleaning, etching, photolithography, chemical mechanical planarization (CMP), and wet deposition.

BASF closely cooperate with customers and R&D partners to create innovative solutions not only for today but for the next generation technology. Being one of the market leader in electronic materials in Asia and in Europe, we excel in providing high purity and quality products and solutions for all manufacturing processes of semiconductors.

#### (01) Tests of silicon wafer – Wetting properties & polishing test

09/21/2012; 08:20; A1/A2: Atmo; FullHD



Microchip production is complicated. More than 600 working steps are required to turn the raw material, quartz sand, into a modern processor. Most of these steps require the use of special chemicals, for example to clean and etch silicon chips.

Every step of chip manufacture takes place in clean room laboratories where all the furnishings are plastic and filters are installed to remove the last particle of dust from the ambient air.





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Anyone entering these facilities must wear a full set of protective gear including gloves and a face mask.

### (02) Customized chemicals - Preparing of customized high purity chemicals

09/21/2012; 04:40; A1/A2: Atmo; FullHD



With its structure and the way it is integrated into BASF's Verbund, the Electronic Materials Center Europe is unique in Europe. This allows the Electronic Materials business unit to offer its customers a wide range of standard products as well as tailor-made solutions.

Chemical technicians Michael Däubert and Dajana Förster during preparations for the manufacture of customized high purity chemicals. At the Electronic Materials Center Europe, BASF experts advise customers from the semi-conductor industry and offer solutions for specific customer requirements.



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### (03) In-process check - In-process check during the manufacture

09/21/2012; 02:50; A1/A2: Atmo; FullHD



The process chain of high-purity chemicals begins with the selection of the proper raw materials. At BASF, we obtain raw materials either by our own backward integrated production or by choosing state-of-the-art and reliable manufacturers as partners. We work closely with these partners so that they can draw on our decades of experience and are able to meet our quality criteria.

Two employees carry out electronic process monitoring during the manufacture of high purity chemicals. At the Electronic Materials Center Europe, BASF experts advise customers from the semi-conductor industry and offer solutions for specific customer requirements.