



creating a material advantage



Facility Information

Address: 9 Crosby Drive, Bedford, MA

Size: 80,000 square feet

Approximate number of employees: 100

Overview

Entegris' i2M Center for Advanced Materials Science (i2M Center) is one of the world's most advanced centers for the research, development and manufacturing of [filtration media](#) technologies and proprietary, innovative [low-temperature coating technologies](#). These products are core components for filtration and [electrostatic clamp \(E-Chucks\)](#) solutions used in semiconductor and other demanding manufacturing environments.

Located in Bedford, MA, the 80,000 square foot i2M Center includes approximately 6,000 square feet of rated clean-room space. Entegris has invested more than \$55 million in building infrastructure upgrades and equipment to create the i2M Center.

"i2M" stands for "ideas to market" and represents the focus of the new facility on innovation in the area of materials science. The i2M Center is home to approximately 100 employees, many of whom hold advanced engineering degrees in chemical engineering and related sciences.

For more information, visit www.entegris.com/newsroom.aspx.

Industry Need

As smart phones, tablets and other electronics become smaller, more powerful and consume less energy, the technologies that are being employed to manufacture those devices are pushing the boundaries of physics. Entegris is enabling those technologies by solving the most difficult purification, process control and material protection challenges in advanced semiconductor and electronics manufacturing.

Currently, semiconductor devices are manufactured using the most advanced processes and materials known to man and require levels of purity that measures contamination in parts per quadrillion (ppq). Achieving these precise levels of purity requires filtration solutions that can prevent nanolevel particles, bubbles and ions from reaching the semiconductor substrate during manufacturing. Polymeric membranes are the core material which is used to capture these contaminants. These solutions help advanced high-tech manufacturers improve productivity, performance and technology to develop next-generation semiconductors and electronics.

Related Facts

- The level of contamination control required for advanced semiconductor technologies is far more stringent than in any other industry. Other industries deal with particle sizes in the 20–200 nanometer range (bacteria is 200 nanometers and the smallest virus is 20 nanometers). Entegris' current line of filtration products helps control contamination from particles as small as 3 nanometers in size. This requires highly sophisticated and extremely advanced membrane filter manufacturing.
- For the next generation of semiconductor devices, the manufacturing environment must reach levels of purity that are measured in ppq. This means that the allowable level of contamination is one ppq, which is equivalent to one drop of water in a space the size of the Empire State Building.



About Entegris

For almost 50 years, Entegris has provided a wide range of products for purifying, protecting and transporting critical materials used in processing and manufacturing for the semiconductor, microelectronics, energy, life sciences and other high-tech industries. These products and materials are often used to make the building blocks of many of the world's most complex microelectronic products, such as computers, mobile devices and phones, data storage components, televisions and monitors and automobiles. With research and development, customer service, analytical labs and manufacturing in Asia-Pacific, North America and Europe, Entegris supports customers around the globe as they take technology to the next level.

Company Contact

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QUICK FACTS

- Headquartered in Billerica, MA, with a global infrastructure of manufacturing, service centers and research facilities in the United States, Malaysia, Singapore, Taiwan, China, Korea, Japan, Israel, Germany and France
- Fiscal 2013 pro forma sales of \$1.1 billion
- Holds 618 U.S. patents and 1,073 patents in other countries
- Approximately 3,500 employees worldwide
- Traded on NASDAQ under ENTG

MILESTONES

- 1966 – Founded as Fluoroware, Inc.
- 2000 – Begins trading under the ENTG symbol on NASDAQ
- 2005 – Merges with Mykrolis Corporation, a leading provider of liquid filtration and gas purification technologies
- 2006 – Expands manufacturing facility in Kulim, Malaysia
- 2007 – Acquires Surmet Corporation's high-purity semiconductor coatings business
- 2008 – Acquires Poco Graphite, an industry leader in high-performance graphite and silicon carbide
- 2009 – Acquires PureLine Co., a fluid handling component manufacturer, in Kangwon-do, Korea
- 2011 – Opens manufacturing facility in Hsinchu, Taiwan
- 2012 – Opens the Advanced Technology Center, manufacturing for 450 mm and EUV, in Colorado Springs, CO
Acquires Entegris Precision Technology, an HDPE drum blowmolding facility in Yangmei, Taiwan
- 2013 – Acquires Jetalon Solutions, maker of precision chemical sensors and analyzers
- 2014 – Acquires ATMI, Inc., a leading provider of advanced materials

EXECUTIVE MANAGEMENT

Bertrand Loy, President and Chief Executive Officer
Gregory B. Graves, Executive Vice President and CFO
Paul L. H. Olson, Chairman of the Board