

A global network of application development centers

"What we do is about working together globally," says Nicolas Cudré-Mauroux director of research, development, engineering and business development at the Kingston Research & Engineering Center, Kingston (ON) Canada. "This is a very fundamental change in the way we work, compared to a few years ago. You get a snowball effect in terms of productivity and innovation, and you think in terms of market needs all over the world. We have people here in Canada working on projects for China, and we talk all the time about developments in Brazil, India or Europe."

All DuPont Engineering Polymers application development centers interact daily, often on a 24/7 basis during the development cycle to help ensure that a customer's program launches smoothly and efficiently. The centers also serve as a bridge from pure science to the application of science specific to a customer or market need. Often that entails optimizing a product for a new processing technique, but it can also mean scaling up a new science for commercial success. As one example of working together, the Wilmington USA team recently worked closely with the European Technical Center in Geneva on a project to assist customers in the E/E development of encapsulated wheel speed sensors for anti-lock brakes.

As another example, Stewart Daykin, development and technology business manager in Geneva, cited the development of structural backbones made of DuPont™ Zytel® HTN for Nokia, where the European Technical Center worked closely with Wilmington and Kingston to make the project a success for the customer.

In Asia Pacific, Engineering Polymers' Development Manager for the region, Philippe Hanck, based in Utsunomiya, Japan, said that thanks to global networking with DuPont application development centers in China and Korea, the first thermoplastic engine valve cover developed in India is now undergoing final testing and will soon be on the road, delivering superior performance while saving weight and costs.



Troy Application Center, Detroit (MI) USA

Established 1985; No. employees: 20; Contact: Mike Day
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DuPont Engineering Polymers' Automotive center of excellence. Specializes in delivering innovative, timely and effective solutions that help customers get from art to part more effectively. Specialties include: applied molding technology; Rapid Proof of Concept using innovative fabrication techniques that help a customer refine a design to accelerate developments, manage costs and build confidence; material analysis and parts testing; customer training. Located within DuPont Automotive Headquarters, this center can link customers to other DuPont automotive technologies such as Coatings. Troy is equipped with a range of injection molding presses tailored for automotive industry use – from 123-1,000 tons, a Branson vibration welder, a walk-in oven and other specialized equipment to help provide heat aging studies and analyze pressure, leak, fatigue and burst.

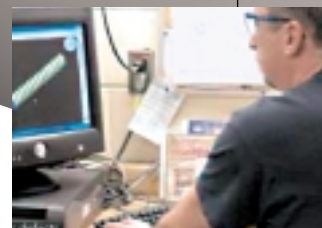
Chestnut Run, Wilmington, USA

Established 1954; No. employees: 91; Contact: Lisa Roessler
Tel: +1 302 999 4404 Email: lisa.a.roessler@usa.dupont.com

Chestnut Run was the first Engineering Polymers center dedicated to supporting customers in application development. Today, Chestnut Run is specialized in consumer and industrial products application development. Specialties include microcellular foaming and encapsulation techniques for the E/E sector. The center is fully equipped to



mirror a customer's molding facility, with 10 horizontal- and vertical-type injection molding machines with clamp capacity ranging from 72 to 270 metric tons and shot capacities from 8-570 grams.



Kingston Research & Engineering Center, Kingston (ON) Canada

Established 1955; No. employees: 170; Contact: Nicolas Cudré-Mauroux
Tel: +1 613 548 5330 Email: nicolas.cudre-mauroux@can.dupont.com

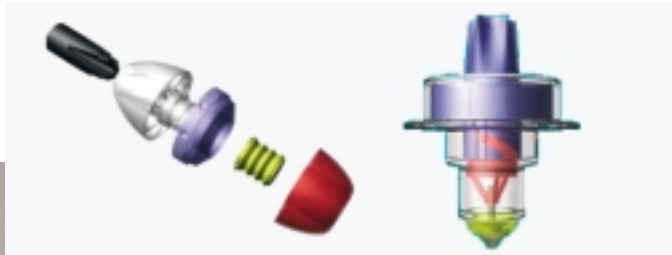
Specializes in the establishment of pilot plants for the development of new DuPont Engineering Polymers (for example, Zytel® HTN and DuPont™ ETPV were both 'discovered' and developed at Kingston); high-precision profile extrusion technology; high-performance polymeric blends and short fiber composites; new polymers based on renewable resources such as bio-materials; polymer modification.

The European Technical Center, Geneva, Switzerland

Established 1955; No. employees: 170; Contact: Stewart Daykin
Tel: +41 22 717 6760 Email: stewart.daykin@eur.dupont.com

The ETC in Geneva is a global center of excellence for blow molding; application development and assembly, and decorative techniques in a broad range of market segments from industrial and consumer goods through sporting goods, E/E, automotive and pharmaceutical; creativity and design; functional aesthetics; low-wear and low-friction resins; laser welding; microcellular foaming; water and gas-assisted injection molding.

Geneva heads a network of satellite European technology centers; Hemel Hempstead (UK), Bad Homburg (Germany), Milan (Italy), Paris (France) and Barcelona (Spain) all specialize in CAE, processing and testing while Dordrecht (The Netherlands), Uentrop (Germany) and Mechelen (Belgium) specialize in R&D, processing and testing.



The Engineering Polymers Asia Pacific Research and Application Development Network

Established: Between 1983 and 2005; No. employees: 700, with 80 dedicated to EP; Contact: Philippe Hanck/Tel: +81 3 552 186 Email: Philippe.hanck@jpn.dupont.com



Utsunomiya Technical Center, Japan:

specializes in cutting edge material formulation and processes, with a focus on the automotive and electrical / electronic industries. Utsunomiya is also a global center of excellence for laser welding, high temperature materials and the development of environmentally-acceptable flame retardant materials.

Nagoya Automotive Center, Japan (opened 2005):

A collaborative specialisation center to develop automotive system solutions by bringing together material science and technology from DuPont worldwide with the know-how of local automotive industry partners.



Shanghai R&D Center, China (opened 2005):

Specializes in technical support and application development in a broad range of industries including automotive, E/E and appliances. The center also collaborates with major Chinese research institutes and universities.



These Asia Pacific technology sites are relayed by a network of satellite centers close to DuPont partners across the region. These include: **Shenzhen Technology Center, China:** which specializes in technical support for industrial, consumer goods and E/E customers.



Korea Technical Center, Seoul: specialized in computer aided engineering (CAE) for automotive application development.



Indian Design Center in Mumbai (opened 2005): specializing in industrial design and development, computer aided design (CAD), application development. The Indian Design works closely with leading Indian research institutes such as the Indian Chemical Institute in Pune.



Thai Engineering Polymers Lab in Bangkok: specializing in technical support, trouble-shooting, part quality and technology extension.