Various products developed by Shin-Etsu are indispensable to semiconductor materials and their production processes.

The Shin-Etsu Group is a global leader in developing sophisticated technologies for the semiconductor industry. Throughout the semiconductor production process, Shin-Etsu technologies support greater integration and production efficiency.

**Silica and Silicon Metal**
Simcoa Operations Pty. Ltd. of Australia has long-standing silica mining rights and produces silicon metal, a main raw material for semiconductor silicon, silicone and synthetic quartz. It provides key support to Shin-Etsu by ensuring a stable, long-term supply of high-quality silicon metal.

**Silicon Carbide Products**
The silicon carbide products of Shinano Electric Refining Co., Ltd., greatly contribute to improving precise processing of silicon wafers through their use as sawing materials and abrasives.

**Silicon Wafers**
Shin-Etsu was first to globally mass produce 300mm silicon wafers in 2001. Shin-Etsu Handotai Co., Ltd., established defect-free technology for single crystals and high-flatness processing technology for silicon wafers, gaining strong customer trust for its commercial production capabilities and quality technologies.

**Wafer Containers**
Group company Shin-Etsu Polymer Co., Ltd., has an excellent track record in front opening shipping boxes (FOSB) and front opening unified boxes (FOUP).
Developing Products for the Semiconductor Industry

**Pellicles**
Shin-Etsu supplies high-quality pellicles for ArF and KrF excimer laser lithography. These products have high light-resistance and good transmission uniformity. In addition, Shin-Etsu has succeeded in the development of super-large-size pellicles for the production of liquid crystal display (LCD) panels.

**Photoresists**
Shin-Etsu developed the first photoresist for use with the short wavelength excimer laser in 1996, and has become the leading manufacturer in this field. Sales have also begun for trilayer materials used in post-45nm generation refined processes.

**Photomask Blanks**
Photomask blanks are photomask materials used for etching circuit patterns on silicon wafers. In fiscal 2009, Shin-Etsu began commercial production of cutting-edge photomask blanks, which are indispensable to the refining of semiconductors.

**Synthetic Quartz Photomask Substrates for LSIs**
Used to transfer circuit patterns to semiconductor wafers, these photomask substrates have earned a reputation among customers for outstanding quality and consistency of supply. In recent years, these substrates are also being used as raw materials for photomask blanks.

**Epoxy Molding Compounds**
Shin-Etsu’s epoxy molding compounds provide excellent reliability and moldability due to the utilization of Shin-Etsu’s own silicone low-stress technology, special filler technology, and unique flame retardation technology, or “green compound technique.”

**Silicone-based Thermal Interface Materials**
Shin-Etsu offers various silicone-based thermal interface materials. These thermally conductive materials fill gaps between heat-generating units like CPUs and heat sinks.