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Dainippon Screen, Ashland Specialty Chemical and Kobe Steel forge strategic Alliance for developing next-generation semiconductor manufacturing process.

Dainippon Screen Mfg. Co. Ltd. (head office in Kamigyo-Ku, Kyoto: Akira Ishida, President) announced that it has formed an alliance with Ashland Specialty Chemical Company (head office in Ohio, USA), a division of Ashland Inc., in a joint effort to develop next-generation process supercritical fluid technology in semiconductor manufacturing. Dainippon Screen has already launched a project with Kobe Steel Ltd. to develop the new process and equipment. Ashland has joined the project to provide its expertise in developing and providing next-generation chemicals for supercritical CO₂ wafer cleaning processes.

Supercritical fluid processes have been used in food or chemical industries for many years. Nevertheless their application in semiconductor manufacturing are just now beginning to gain a foothold. The densities, viscosities and diffusivity properties of supercritical fluids are ideally suited for semiconductor wafer cleaning and drying, but also bring some inherent challenges. As supercritical fluids behave like an organic solvent, they are effective in removing organic post-etch residue from wafer. However they are not very effective in removing inorganic residues deposited by oxides, copper and other metals.

Ashland's role in conjunction with DNS and Kobe will be to research, develop and test various materials that can be used as additives to supercritical fluid to enhance its effectiveness in cleaning typical post-etch residues. Dainippon Screen and Kobe Steel will coordinate with Ashland in developing wafer cleaning processes to meet customer requirements for next generation wafer cleaning.

About Ashland

Ashland Specialty Chemical, a division of Ashland Inc., is a worldwide supplier of specialty chemicals serving industries including adhesives, automotive, composites, foundry, merchant marine, plant, paper, plastics, semiconductor, watercraft and water treatment. In the microelectronics industry, it is known as a leading developer and supplier of ultrapure chemicals, photoresist strippers, on-site chemical management and parts cleaning services. The division has electronic chemicals production facilities in the USA, Italy, Korea and Taiwan.

URL: <http://www.ashspec.com>

Ashland Inc. is a Fortune 250 company providing products, services, and customer solutions throughout the world. Its businesses include road construction, specialty chemicals, lubricants, car-care products, chemical and plastics distribution and transportation fuels.

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