Toyochem to Show Heat-dissipating Technology for Power Devices at APEC 2019

March 14, 2019, Tokyo, Japan—Toyochem Co., Ltd., a member of the Toyo Ink Group, announced today that it will be exhibiting its latest power management technologies at the Applied Power Electronics Conference and Exposition 2019 (APEC 2019), a global event for applied power electronics. Efficient thermal management is critical for the reliable performance of high power electronics, especially those found in automotive applications. To address industry needs for greater heat-dissipating properties, Toyochem will be showcasing the LIOELM™ FTS series of thermally conductive adhesive sheets for bonding substrates to the heat sink, or as an insulating layer in power device packaging.

The LIOELM FTS sheet was developed by using Toyochem’s advanced heat-resistant resins, resulting in a highly heat-conductive product with excellent flexibility and reliable heat-dissipating properties. Toyochem researchers in Japan were able to solve the performance trade-off problem between the elastic modulus and thermal resistance that typically arises in conventional epoxy-based thermal interface materials. Thanks to its soft consistency (ultra-low modulus) and special rheology, the LIOELM FTS fills in every void and conforms to every rough surface, thus creating a high strength interface between power device components or substrates. This results in optimum heat transfer and reduced thermal stress, making it possible to reach the low levels of thermal resistance necessary to transfer or insulate heat effectively.

“At the moment, the new adhesive sheets are undergoing trials in various LED light modules and other power devices, mainly with automotive makers in Japan and abroad,” reported stated Masashi Arishima, General Manager of Toyochem’s New Material & System Business Department. “The initial feedback has been very positive, and we are now looking to secure a stronger foothold in the US and Europe where demand from the auto sector, in particular for hybrid and electric vehicles, is expected to support growth of the power electronics market. With the new LIOELM series, we see an exciting opportunity to drive the market forward.”

Also on display at the Toyochem booth will be the LIOMETAL™ SB series of nano-silver pastes for high heat-resistant and pressureless sintering of a semiconductor chip to a circuit board. The company's original nano-particle design allows LIOMETAL pastes to create uniform layers of sintered silver that exhibit both excellent durability and adhesion under high temperatures.

APEC 2019 will take place March 18 - 21 at the Anaheim Convention Center, California, USA. For more information on APEC 2019, visit www.apec-conf.org/.

About Toyochem Co., Ltd.

Toyochem, a wholly owned subsidiary of the Toyo Ink Group, oversees the Group's Polymers and Coatings-related business segment as a core operating company. Headquartered in Tokyo, the company operates three production facilities in Japan. Leveraging the Group's polymer design technologies that have been cultivated for over a century, Toyochem manufactures polymers, adhesive tapes, marking films and coatings for a wide array of industrial
applications. The company’s slogan “Something New, Close to You” embodies its commitment to continuously bring new value to everyday lives by delivering new solutions that use Toyochem polymers as their core material. For more information, visit www.toyo-chem.com/en/.

For more information about the Toyo Ink Group, see the website of the parent company Toyo Ink SC Holdings Co., Ltd. at schd.toyoinkgroup.com/en/.

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