Gelest, Inc. Acquires BIOSAFE® Antimicrobial Technology

MORRISVILLE, Pa. (May 18, 2016) – At ANTEC® 2016, Gelest, Inc. (Booth #504) is highlighting its silicon-based BIOSAFE® antimicrobial, which it recently acquired after a two-year period of exclusive licensing. Gelest is now shepherding the product through Food Contact approvals from the U.S. FDA and EPA.

BIOSAFE antimicrobial imparts bacteriostatic, fungistatic, and algistatic properties to substrates, including plastics, to prevent deterioration and discoloration caused by fungi, to prevent algae growth and to inhibit the growth of odor-causing bacteria.

“Polymers are used regularly in the food industry for equipment, prep surfaces, tubing, and storage containers,” said Donald J. Wagner II, Gelest Technical Marketing Manager and BIOSAFE Specialist. “These polymers are susceptible to microbial growth which can cause contamination issues and lead to high maintenance costs and heavy use of harsh chemicals for cleaning. The concept of antimicrobial surfaces is not new, but BIOSAFE technology is the first non-leaching approach with the safety and efficacy to pursue food contact approval, which we anticipate having mid-2017.”

Available as a powder, solvent or aqueous solution, BIOSAFE antimicrobial covalently bonds with the surfaces and substrate matrices, or forms an interpenetrating network
with the host material. The net result is that BIOSAFE does not leach over time from the treated article. The mechanism of action is physical and electrochemical. It is not a biological poisoning process like other biocides. The positive charge on condensed 3-(trihydroxysilyl) propyldimethyloctadecyl ammonium chloride (HM4100) kills by disrupting the cell membrane, which does not promote microbe mutation, adaptation or resistance.

With proper integration, BIOSAFE products have high antimicrobial performance in ISO and ASTM testing. The active ingredient in the BIOSAFE antimicrobial was developed and registered with the U.S. EPA in the mid-1970s, and has since been widely used in numerous applications. BIOSAFE Inc. has expanded the breadth of applications and manufacturing processes by removing the VOCs and making the antimicrobial available in a new polymeric powder. Unlike its predecessors, the powder can be compounded with polymer resins.

Produced by the Society of Plastic Engineers, ANTEC 2016 will take place May 23 through May 25 in Indianapolis.

About Gelest – www.gelest.com

Gelest, Inc., headquartered in Morrisville, Pennsylvania, a leading manufacturer and independent producer of specialty materials for the semiconductor industry for over 25 years, is recognized worldwide as an innovator, manufacturer and supplier of commercial and research quantities of organosilicon compounds, metal-organic compounds and silicones. Gelest serves advanced technology markets through a materials science-driven approach. The company provides focused technical development and application support for semiconductors, medical materials,
pharmaceutical synthesis, diagnostics and separation science, and specialty polymeric materials: “Gelest – Enabling Your Technology.”