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For Immediate Release

Applied NanoWorks Develops FlexB™ Flame Retardant
Achieves UL-94 V-0 Ratings at Low-load Levels

Malta, New York, February 10, 2009. Applied NanoWorks (ANW), an inorganic materials development company, has announced FlexB™, a boron-based, non-halogenated flame retardant (FR) additive for nylon, epoxies and water-based coatings. Material testing has achieved UL-94 V-0 ratings with FlexB loading levels as low as 3%.

“FlexB™ is targeted at high-performance materials where traditional high load levels negatively affect weight, strength and other physical attributes,” said Josh Kunkel, Business Development Manager at ANW. “FlexB™ addresses the industry need for non-halogenated flame-resistance while keeping polymer performance at optimized levels.”

With increasingly stringent government regulation and consumer demand for more environmentally friendly materials, the plastics and coatings industries are seeking non-halogenated low-load fire retardants. “In many applications halogenated FR additives are just not an option anymore,” Kunkel noted.

Engineering plastics, commonly used in automotive and electrical applications, often must meet UL-94 V-0 flammability ratings. Many current FR additives require loading levels as high as 20-30% to meet this standard, impacting the processability, rheology and mechanical properties of the material. The ability of the [FlexB™ FR additive](#) to achieve UL-94 V-0 ratings at load levels as low as 3% provides flexibility in material performance and selection.

“FlexB™ has shown increased flame retardancy over traditional FR additives by as much as 10X,” stated Kyle Litz, Chief Technology Officer at ANW. “This increase is due to the ability of FlexB to bind into the backbone of the polymer, providing four levels of protection: off-gassing, water productions, charring and thermal shielding. This is a significant advancement over current flame retardant additives that are simply mixed in with the polymer.”

The FlexB™ flame retardant additive, developed using Applied NanoWorks’ [MCP Technology™](#) platform, is designed to deliver specific performance gains to material systems requiring flame retardants. Due to the increased inorganic functionality derived from MCP Technology™ FlexFR flame retardant additives are a fundamentally simpler way to add FR characteristics to polymers.

The Underwriters Laboratories Inc. UL-94 program defines the Standard for Flammability of Plastic Materials for Parts in Devices and Appliances. The UL-94 V-0

classification relates to materials commonly used in manufacturing enclosures, structural parts and insulators found in consumer electronic products.

Applied NanoWorks is an inorganic materials development company focused on creating inorganics that provide new levels of performance required to build successful material systems for a clean tech world. For information you can find us at www.appliednanoworks.com or call 518.899.9600