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Milliken's newest DeltaMax[™] Performance Modifier will help manufacturers of polypropylene impact copolymers to boost efficiency

-- Launching at K 2019, DeltaMax 5000a to drive operating efficiencies and higher performance of PP ICPs from durable goods to food packaging

Spartanburg, S.C. - At K 2019, a global plastics industry conference in Düsseldorf, Germany, Milliken & Company will introduce the newest product in its family of DeltaMax[™] Performance Modifiers. This latest addition is designed to expand use of the additive into all market segments, including food packaging.

Milliken unveiled this reactive extrusion platform at the NPE 2018 show in the United States. The existing technology allows injection molders to make stronger parts using more efficient manufacturing parameters and source a broader range of raw materials.

The new additive, called DeltaMax 5000a, is expected to drive polypropylene (PP) innovation at the resin producer level, according to Emily Blair, Milliken's global product line manager. "DeltaMax 5000a will allow resin producers to expand the performances of their resin portfolios and to boost their productivity by increasing the throughput of their reactors," she says.

Those molding products from polypropylene are always seeking the "trifecta" of properties, meaning high melt flow and excellent impact resistance while maintaining good stiffness, notes Blair. But, until now, tweaking the material for one property has always meant sacrificing another one of those properties.

Now, with DeltaMax Performance Modifiers—which can raise melt flow while optimizing impact properties—such trade-offs are largely a thing of the past, Blair says.

By maximizing the impact strength and melt flow of resins without compromising stiffness performance, processors using the DeltaMax-modified resins are now able to use PP in a wider range of applications in more cost-effective ways. Running high-melt-flow resins allows converters to be more productive, and make more complex parts, all while also improving their carbon footprint by reducing scrap and using less energy in the molding process.

In addition, the DeltaMax technology is effective in modifying post-consumer and post-industrial recycled resins. It elevates impact and melt flow to levels associated with virgin resins. This unique capability allows compounders and converters to incorporate up to 100 percent recycled PP without sacrificing performance or processing.

With FDA approvals expected by year end, Milliken's new performance modifier will expand usage of the product into food packaging, driving benefits for caps, closures and thin-wall packaging. "Milliken is currently pursuing food approvals for Europe, as well," notes Blair, adding that these approvals are expected in late 2020.

The industry has long struggled to achieve cold-temperature impact performance for these segments. Maximizing the flow characteristics of these resins and gaining impact performance in cold temperature settings has not been achieved to date. DeltaMax will set a new standard for what is possible.

DeltaMax 5000a will be commercially available later this year, with a full, global roll-out set for next year. The launch of this latest grade will greatly expand potential end-use applications for DeltaMaxmodified PP copolymers beyond what is done today.

Essentially, Blair explains, DeltaMax additives mean that players at various points in the supply chain to include resin producers, compounders, injection molders, and recyclers—stand to benefit from the performance advantages offered by the DeltaMax family.

The net effect, Milliken says, "is that producers, converters, brand owners and OEMs can now meet market needs for better durability, enhanced creative designs and the environmentally responsible use of plastic, all while keeping a keen eye on improving sustainability and reducing costs."

Blair adds, "DeltaMax is becoming a major driver for innovation in many parts of the world, including Europe," and Milliken is working now to expand that effect across the supply chain. The end goal for all users, she notes, is to enable the manufacture of better-performing products, more profitably and more sustainably. The growing portfolio of DeltaMax Performance Modifiers checks all those boxes.

Visit Milliken's K 2019 website at <u>k-2019.milliken.com</u> or stop by our booth at the Oct. 16-23 K 2019 show (Hall 6/A27) to learn how Milliken is "Enhancing plastics with Color, Care, Clarity and Performance. Together."

About Milliken

Milliken has been solving everyday problems with innovative solutions for more than 150 years. Our research, design, and manufacturing expertise reaches across a breadth of disciplines including specialty chemicals, floor covering, healthcare and performance and protective textiles. An unwavering commitment to ethics guides our work to redefine how we add strength and protection to products, how we infuse vibrancy and color into our surroundings, and how we care for the environment. For us, success is when discoveries made within Milliken help us all have more meaningful connections with the world. Discover Milliken at <u>www.milliken.com</u>, and join us on <u>Facebook</u>, <u>Instagram</u>, <u>LinkedIn</u>, and <u>Twitter</u>.

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Milliken's newest DeltaMax[™] Performance Modifier will help manufacturers of polypropylene impact copolymers to boost efficiency. (Photos © 2019 Milliken & Company, all rights reserved, MKPP207)

For high resolution pictures please contact Amy Godfrey (agodfrey@ahminc.com).