Press release

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Nexam Chemical Reactive Recycling™: Scientifically proven solution for enhanced polymer recycling

Nexam Chemical, a leading provider of innovative solutions for polymer enhancement, proudly announces the scientific validation of its breakthrough Reactive Recycling™ additives, designed to revolutionize the recycling of polypropylene (PP). This patented technology demonstrates remarkable capabilities in repairing polymers degraded during subsequent recycling cycles, thereby addressing a critical challenge in the plastics industry and enabling sustainable and efficient recycling processes.

Plastic recycling plays a pivotal role in achieving polymer circularity, particularly for polyolefins, where mechanical recycling is often considered a downcycling process. Nexam Chemical's Reactive Recycling™ additives have been scientifically researched and proven effective in restoring the molecular weight and enhancing the processability of recycled PP, thereby elevating its utility in high-demand engineering sectors.

The efficacy of Nexam Chemical's additive was rigorously evaluated in a recent scientific study published in the journal “Polymer Degradation and Stability”. Conducted by researchers from the Department of Applied Science and Technology at Politecnico di Torino, Italy, the study investigated the impact of thermomechanical degradation on PP microstructure during multiple extrusion cycles. Results demonstrated that the introduction of Nexam Chemical's additive effectively prevented the decrease in molecular weight of reprocessed PP, while also inducing favorable melt structuring phenomena.

Dr. Alberto Frache, corresponding author of the study, commented, "*Our research indicates that Nexam Chemical's additive offers a promising pathway for achieving recycled PP with modulable flow characteristics and enhanced processability. This advancement holds significant implications for the circular economy, promoting sustainable practices and resource efficiency*."

The additives in question, already available on the market under the brand name Reactive Recycling™, present a versatile solution for both post-industrial and post-consumer mechanical recycling processes. By preserving the integrity of recycled PP, these additives open new possibilities for waste valorization and the creation of high-quality recycled products. Moreover, this innovation aligns with the global shift towards a circular economy, driving investments and innovations across the plastics industry value chain.

"*We are excited to highlight the scientific rigor behind our Reactive Recycling™ additives, which represent a significant step towards a more sustainable future*" says Christer Svanberg, CTO at Nexam Chemical. "*At Nexam Chemical, we are committed to pioneering solutions that address the challenges of polymer recycling, contributing to a cleaner, greener planet*."

"*This marks a significant milestone within polymer recycling, and I am proud to be able to share this contribution to the global plastics recycling industry. Our Reactive Recycling™ technology opens for a significantly increased use of rPP in processes currently limited to mainly virgin material, for example foaming, blow moulding, vacuum forming and film blowing*", says Ronnie Törnqvist, CEO of Nexam Chemical.

For more information about Nexam Chemical and its innovative Reactive Recycling™ additives, please visit www.nexamchemical.com.

Note: This press release has been translated from Swedish. The Swedish text shall govern for all purposes and prevail in case of any discrepancy with the English version.

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About Nexam Chemical

Nexam Chemical develops technology and products that make it possible to significantly improve the production process and properties of most types of plastics in a cost-effective manner and with retained production technology. The improved properties include strength, toughness, temperature and chemical resistance as well as service life. The improvements in properties that can be achieved by using Nexam Chemical's technology make it possible to replace metals and other heavier or more expensive materials with plastics in a number of applications. In applications where plastic is already used, Nexam Chemicals products can improve the manufacturing process, reducing material use and enable more environmental friendly alternatives. Example of commercial applications: pipe manufacturing, foam production and high-performance plastics. More information about the business will be found on www.nexamchemical.com. The company´s Certified Adviser is FNCA Sweden AB. FNCA Sweden AB can be reached at info@fnca.se or by phone +46-8 528 00 399.