

Press release

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Reactive Recycling™ validated in injection molding - opening a major global plastics segment

A new independent study now validates Nexam Chemical's Reactive Recycling™ technology for injection molding. In addition to current applications in extrusion and film blowing, the scientific study confirms that the additive R201 successfully stabilizes mechanical properties in commercially relevant blends of recycled and virgin polypropylene (PP). Nexam Chemical already has a significant presence in the injection molding segment, primarily through its Masterbatch business, and this new validation represents a key academic confirmation of the company's circular core technology in a global high-volume segment.

Polypropylene is one of the world's most widely used polymers, accounting for approximately one-fifth of global plastic production. Injection molding is among the most common manufacturing methods for consumer products, automotive components, and technical parts. A central challenge for the industry is increasing the share of recycled polypropylene without compromising mechanical performance or processing parameters.

The study, conducted by an independent research institute without Nexam's involvement, demonstrates that the addition of 1% R201 in a blend of recycled PP (rPP) and virgin material:

- **Ensures material performance:** Maintains mechanical properties at a stable level, with observed improvements in flexural strength and stiffness.
- **Optimizes flow:** Provides a controlled reduction of MFR (Melt Flow Rate) to commercially optimal levels for injection molding.
- **Extends lifecycle:** Protects the material against degradation during repeated processing, which is crucial for a functioning circular economy.

From lab to industrial reality

In a practical application test, a chair was manufactured using a 50/50 blend of rPP and virgin material, with the addition of Nexam's additive NEXAMITE® R201. Production was carried out using the same process parameters as for 100% virgin polypropylene, proving that the technology is ready for immediate implementation in existing industrial production.

"The study is very exciting as it confirms our technology in a realistic commercial environment. By testing a 50/50 blend, we demonstrate that our additives work exactly where the industry is today. It is not about creating extreme laboratory results, but about enabling stable and high-quality production even when increasing the proportion of recycled material," says Christer Svanberg, CTO at Nexam Chemical.

Direct link to Nexam's strategic focus

For Nexam Chemical, this is central from a business and growth perspective, as the technology addresses a growing market trend and enables "upcycling" rather than downgrading of materials. The solution integrates directly into existing industrial processes without the need for new equipment and is globally scalable. Increasing regulatory requirements, customer demands, and brand-driven sustainability goals are driving demand for solutions that enable higher recycling rates without compromising quality or production stability.

By addressing one of the most widely used polymers globally - polypropylene - and one of the largest processing methods - injection molding - the study reinforces the image of Reactive Recycling™ as a commercially relevant, industrially mature, and scientifically validated platform for long-term value-creating growth.

The scientific article, titled "*Impact of reprocessing cycles and chain extender on recycled polypropylene properties*", is published in an internationally peer-reviewed journal and is available via ScienceDirect: [Link to the study](#)

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.

For more information, please visit www.nexamchemical.com or contact:

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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 Bergs Securities AB. Bergs Securities AB can be reached at info@bergssecurities.se or by phone +46-8 408 933 50.