

Vistamaxx™ performance polymers

Value chain collaboration enhances performance of product incorporating recycled content by using Vistamaxx™ performance polymers

 <p>Toughness</p>	 <p>Cost competitive possibilities</p>	 <p>Incorporates recycled content</p>	 <p>Compatibility</p>
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Data and results presented herein apply specifically to the noted application under this machine run sheet. Your results may differ depending on factors such as operating conditions, equipment and materials used.

ExxonMobil collaborated with EREMA, Moxietec LLC and Engel for a live demonstration at K2025, showcasing thick-walled foamed blocks tailored for the building and construction industry. The foamed blocks are produced using a blended stream of recyclates, consisting of 95% polypropylene rigids and 5% polyethylene film. The incorporation of Vistamaxx™ performance polymers of ExxonMobil Signature Polymers enhances the impact resistance and toughness of the foamed components, allowing for the use of recycled materials without compromising structural integrity.

Performance highlights:

Dart drop testing (Graph 1) revealed a 10% improvement in impact strength for foam parts made with Moxietec™ technology compared to conventional solid parts. The process enabled the use of recycled polypropylene (rPP) and achieved a 30% weight reduction versus solid parts.

Enhanced performance with Vistamaxx™:

- Vistamaxx™ 3020 improved impact strength by ~10% over EREMA foam alone.
- Vistamaxx™ 6102 delivered a ~17% boost, making it the preferred choice for final formulation.

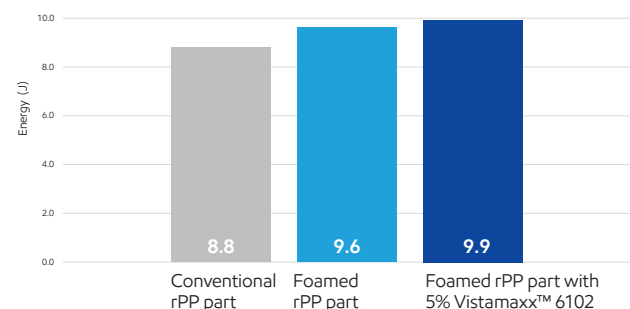
Structural integrity:

- Graph 2 illustrates a fine, uniform cellular structure enabled by Moxietec™ technology.
- The addition of Vistamaxx™ 3020 or 6102 maintained this structure without compromise.

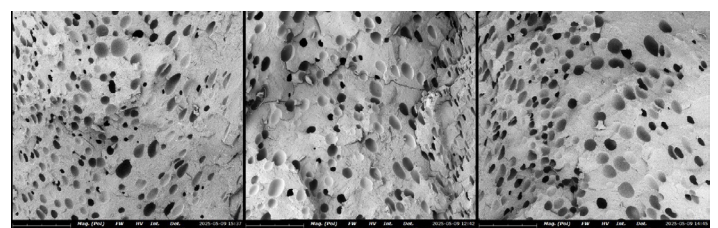
Read the case study



Graph 1: Dart drop impact testing (EREMA rPP foamed with Vistamaxx™ performance polymer)



Graph 2: Structure of foamed brick



Baseline + EREMA only EREMA + 5% Vistamaxx™ 3020 EREMA + 5% Vistamaxx™ 6102



INTAREMA® TVEplus® DuaFil® Compact

Lower temperature, less energy needed.

For the finest double filtration quality in a compact design.

This is how strong "short" can be: The innovative INTAREMA® TVEplus® DuaFil® Compact saves significantly on extruder length. And gets more out of it for you: the finest, double-filtered and optimally degassed recycled pellets - produced at high throughput with extremely low energy consumption. This sets the benchmark for production efficiency in post-consumer recycling.

Proven system, enhanced with even more efficiency.

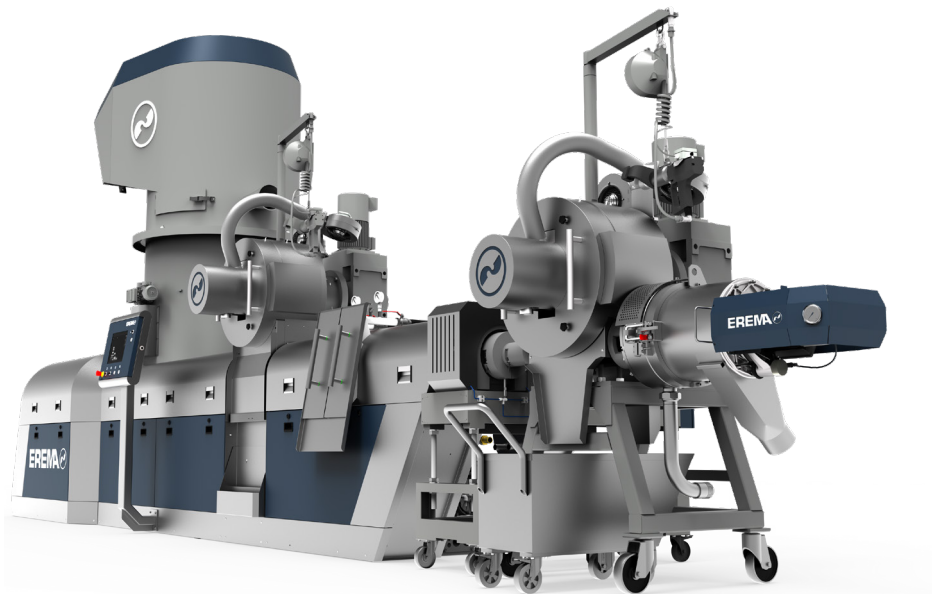
Highly flexible and at the same time extremely process-stable, the double filtration system handles the melt particularly gently, and does so throughout the entire machine. This is the result of combining TVEplus® technology, patented and proven thousands of times over, with the new, patented DuaFil® Compact design.

Mild short transport screw.

Improved, temperature-reduced pressure build-up.

Thanks to the DuaFil® Compact technology, the extruder screw is 10 L/D shorter compared to the previous EREMA double filtration solution because the discharge metering zone is no longer required. A mild, short transport screw with minimal shear stress for the melt is sufficient, as the pressure build-up for the second filtration unit is achieved by a melt pump customised to the application. This significantly reduces residence time, melt temperature and energy consumption. Further plus points: The very strong and reliable degassing thanks to a higher degassing volume and the particularly fine final filtration.

This makes the machine the first choice for many challenging materials. Especially when the application requires polymer-conserving processing as well as strong filtration performance in order to produce an end product with the best recycling quality.



EREMA at K2025. Hall 9 / Stand C09.

Watch INTAREMA® TVEplus® DuaFil® Compact live in action at EREMA's outdoor area: FG CE03

www.erima.com/en/intarema_tveplus_duafil_compact/