

## Joint press release

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### **Heavy metals-free PVC post-consumer recyclate: International industrial project researches pioneering technology as part of a feasibility study**

The polymer industry is giving further innovations in order to solve the next challenges to close the loop of the PVC circular economy. In a transnational project, French chemical company Kem One, Swiss plastics distributor Meraxis and German-based polymers specialist REHAU are working on extracting heavy metals like lead from PVC recyclate. The project is in an early research phase and results could make the raw material even more sustainable. In addition, the extracted heavy metals could be returned to the supply chain cycle.

Lyon/Rehau/Muri. The industry is committed to the continuous improvement of its raw materials and products to achieve the objectives of a circular economy and the creation of a loop for the reintegration of materials at the end of their life cycle. By mobilizing key players in the value chain – Kem One, REHAU Window Solutions and Meraxis – and combining their competencies, success is achieved with Kem One as an expert in PVC production and processes including recycling partnerships, REHAU Window Solutions as a polymer specialist with a strong focus on sustainability and Meraxis, part of the REHAU Group, as a leading distributor of polymer and polymer-based products and solutions.

Initial trials at Kem One, Saint-Fons-France, are promising. The chemical and process engineering specialists of all three companies have expanded the trials to a full pilot phase. This stage enables better process optimization and prepares for a future move into the industrial scale of the technology by 2030.

Teams from all three companies regularly work together on the technology to extract heavy metals from PVC, which combines different recycling methods. The innovative approach of chemical recycling is a supplement to the mechanical recycling technique, which leads to better results. Mechanical recycling involves shredding PVC window frames, for example. Chemical recycling then extracts the heavy metals, like lead (Pb) from the PVC. The extracted lead would be then reintroduced into separate, already existing material specific recycling streams. The lead-free recycled PVC can be processed into new recyclate-based window profiles.

Lead is a highly relevant topic, also reflected in EU-wide legislation. Public awareness and efforts to reduce lead exposure are crucial for a sustainable future. This makes these two recycling steps



**KEM ONE**



**REHAU**

**MERAXIS**

even more important. The development from the early phase to a large-scale industrial solution requires great effort and investment, which is why the project is also dependent on public funding.

This project shows that key stakeholders in the PVC industry are working together to make their materials and products even more sustainable. Kem One, REHAU Window Solutions and Meraxis are leaders in innovation. They all share a common vision of sustainability in their respective activities, and focus on less energy-intensive processes, use of green energy, as well as sustainable purchasing and logistics.

#### **Kem One**

Kem One offers essential and sustainable products derived from salt chemistry, while preserving resources and the climate more each day. As a major European player in PVC, caustic soda, and chlorine-derived products, Kem One exports over 80 % of its production. Its products mainly serve clients in the construction, automotive, and healthcare sectors. The company achieved a turnover of 1.5 billion euros in 2022. Kem One employs 1,450 staff and operates 8 industrial sites (seven in France, one in Spain). The company's objective is to become the world leader in the vinyl sector in terms of carbon emissions.

Web: <https://www.kemone.com>

LinkedIn: <https://www.linkedin.com/company/kem-one>

#### **REHAU Window Solutions – Part of REHAU Industries**

REHAU Industries is the umbrella for the Building Solutions, Window Solutions, Interior Solutions and Industrial Solutions divisions, which operate independently in their respective markets, as well as the cross-divisional Services units REHAU Services & Solutions. More than 12,000 employees at over 150 locations worldwide work together to further improve life through the development of innovative, sustainable technologies for the construction, furniture and industrial sectors: Engineering progress. Enhancing lives. REHAU Industries is part of the global REHAU Group, that unites five strong companies under one roof: Meraxis, New Ventures, RAUMEDIC, REHAU Automotive and REHAU Industries. With polymer-based solutions, the family-owned company generates annual sales of over 4,5 billion euros. About 20,000 people work for the group of companies, which has grown independently over the course of a century.

Web: <https://www.rehau.com>

LinkedIn: <https://www.linkedin.com/company/rehau>

#### **Meraxis Group**

With a turnover of over 2 billion euros, Meraxis is one of the world's leading plastics distributors. The trading company with a global sales and logistics network is headquartered in Muri near Bern (Switzerland). As a full-service provider, the Meraxis Group offers its customers targeted support in strategic procurement: the one-stop shop supplies companies from numerous industries with polymers and polymer-related products for various production processes – from the automotive industry to the construction sector and packaging companies. The Meraxis Group combines its in-depth knowledge of materials and products with its global network of partners and suppliers. The company has extensive experience in the development and processing of high-quality polymers as well as in the management of complex logistics processes. It is part of the REHAU Group.

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