

Bonn (Germany), 7 October 2025

RadiciGroup receives an award from the Society of Plastics Engineers for an innovative battery module made of Renycle® recycled polyamide

Winner in the *Enabler Technology* category: ecodesign of a strategic component for the future of e-mobility

A new important recognition for RadiciGroup from the **Society of Plastics Engineers (SPE)**. An innovative **battery module for electric cars**, made of **Renycle® mechanically recycled polyamide**, won an award in the “**Enabler Technology**” category during the



23rd SPE Automotive Award Night, held in Bonn yesterday. The goal was achieved thanks to the Group’s close collaboration with the other partners working on the project: **Mersen** and **Leartiker**.

Now in the prototype stage, the battery module represents a new technology for the manufacture of essential e-mobility parts, which is based on an approach combining sustainability, technical performance and ecodesign.

A distinctive element of this application solution is the use of **Renycle®**, a polyamide 6-based engineering polymer produced from recycled **post-industrial and post-consumer** feedstock and developed by RadiciGroup as a **flame-retardant grade (UL 94 V-0 at 0.8 mm)**. The material is halogen-and-red-phosphorus-free and UL Yellow Card-certified, ensuring not only lower environmental impact but also excellent mechanical performance comparable to that of virgin materials.

“This award confirms RadiciGroup’s role as a solution provider for the e-mobility sector, by making available innovative materials and expertise in ecodesign,” stated **Carlo Grassini, marketing and technical service – CAE Service manager of RadiciGroup High Performance Polymers**.

“Renycle® is an engineering polymer that combines high mechanical performance and reduced environmental impact, demonstrating that it is possible to replace virgin materials and, at the same time, guarantee performance and safety.”

In addition to the choice of materials, the project introduced **important innovations in the design and production process**. Indeed, the battery pack was designed with **modular architecture** that will facilitate disassembly and maintenance, allowing for the replacement of individual cells if needed. This feature, together with a **25% weight reduction compared to the benchmark**, contributes to improved efficiency during use and **prolongs the useful life of the system**.

This battery module shows how process innovation, material selection and intelligent design can come together to significantly lower environmental impact and reinforce a circular approach. This is a technology that looks ahead to the future of electric mobility, where sustainability and high performance will become an inseparable partnership.

“We are proud of our synergistic working relationship with Mersen and Leartiker – real teamwork that was able to demonstrate the validity of our technical solution,” Fabio Macchini, Automotive R&D project manager of RadiciGroup High Performance Polymers, added. “We hope that our prototype developed according to ecodesign principles can be transformed into an industrial solution and make a tangible contribution to the transition towards more sustainable electric mobility.”

The results of an LCA study carried out on the prototype indicated a reduction of 65% in CO₂ emissions compared to a standard reference battery pack (Segment D).

The battery module will be presented during the **K 2025 trade fair in Düsseldorf** at the RadiciGroup stand, **Hall 6 – Stand B10**, where visitors will have the opportunity to meet the Group’s experts and obtain further information, including in-depth project characteristics.

RADICIGROUP – With approximately 2,800 employees, sales of €1,048 million in 2024, and a network of production units and sales offices spanning Europe, North and South America, and Asia, RadiciGroup today is a worldwide leader in the manufacture of a vast range of specialty chemicals, polyamides, high performance polymers, and advanced textile solutions, including nylon and polyester yarns, recycled yarn, bio yarns from renewable sources and nonwovens. Its products build on advanced chemical know-how and the vertical integration of the polyamide supply chain. They are developed for applications in a wide variety of industrial sectors, including the Automotive, Electrical/Electronics, Consumer Goods, Apparel, Furnishings, Building, Home Appliances and Sports sectors. Underpinning RadiciGroup's strategy is an overriding commitment to innovation, quality, customer satisfaction, and social and environmental sustainability. With its macro business areas – Specialty Chemicals, High Performance Polymers and Advanced Textile Solutions – RadiciGroup is part of a broader industrial group encompassing textile machinery (ITEMA), energy (GEOGREEN) and the hotel business (SAN MARCO).
