
FLEXIBLE POLYMERS

LUCOFIN® EBA SPECIALITY BONDING GRADES

SELF REINFORCED POLYMER COMPOSITES



... we make better polymers

LUCOFIN® SOLUTIONS FOR SRPP – PERFORMANCE MEETS SUSTAINABILITY

Self-reinforced polypropylene (SRPP) composites represent a cutting-edge material innovation in the field of lightweight construction. Unlike conventional composites, SRPP is an all-polypropylene system in which both the matrix and the reinforcement are made from polypropylene. This unique structure allows for a number of key advantages that Lucofin® solutions are specifically engineered to enhance.

SRPP composites offer significantly increased strength and stiffness compared to standard polypropylene, making them a compelling choice for applications where mechanical performance is essential. At the same time, their low weight provides a critical benefit in industries such as automotive, packaging, and consumer goods, where every gram counts.

Another major advantage of SRPP is its recyclability. Since it consists entirely of a single polymer, it simplifies the recycling process and aligns with modern sustainability goals. In addition, the material's excellent chemical resistance ensures durability even in demanding or corrosive environments.

With Lucofin® as a bonding and processing aid, the manufacturing and performance of SRPP components can be further optimized – enabling efficient production, enhanced bonding to other materials, and greater end-product reliability.

VERSATILE APPLICATIONS OF LUCOFIN® EBA SPECIALTY BONDING GRADES

Lucofin® EBA specialty bonding grades are used in a wide range of applications where strong adhesion, lightweight construction, and impact resistance are essential.

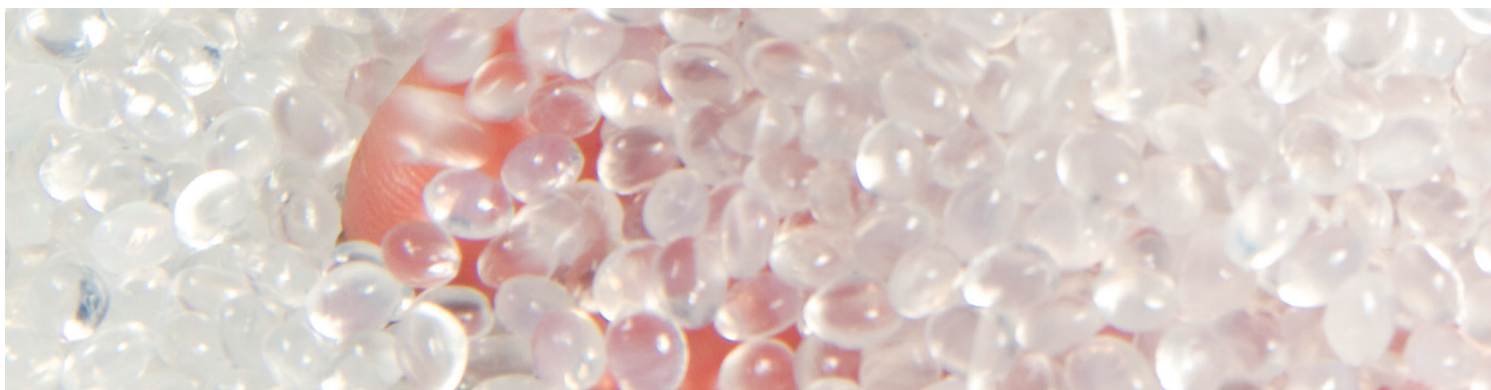
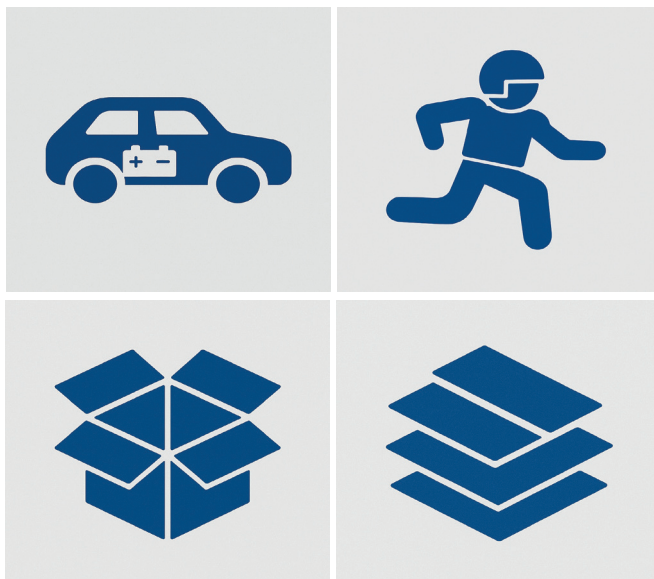
In the automotive sector, they are used in both interior and exterior components to reduce weight and enhance fuel efficiency – particularly in electric vehicles, for example in battery covers.

For sports equipment, Lucofin®-based composites offer excellent impact resistance, making them ideal for use in helmets, protective gear, and other safety-related applications.

In packaging, they are employed in the production of durable yet lightweight solutions that combine strength with material efficiency.

Within the construction industry, these materials are used for lightweight panels that are easy to process while maintaining high stability and reliability.

Thanks to their performance and versatility, Lucofin® EBA bonding grades are a key component in innovative and sustainable material solutions across industries.



EFFICIENT SRPP COMPOSITE MANUFACTURING WITH LUCOFIN® X1026-1

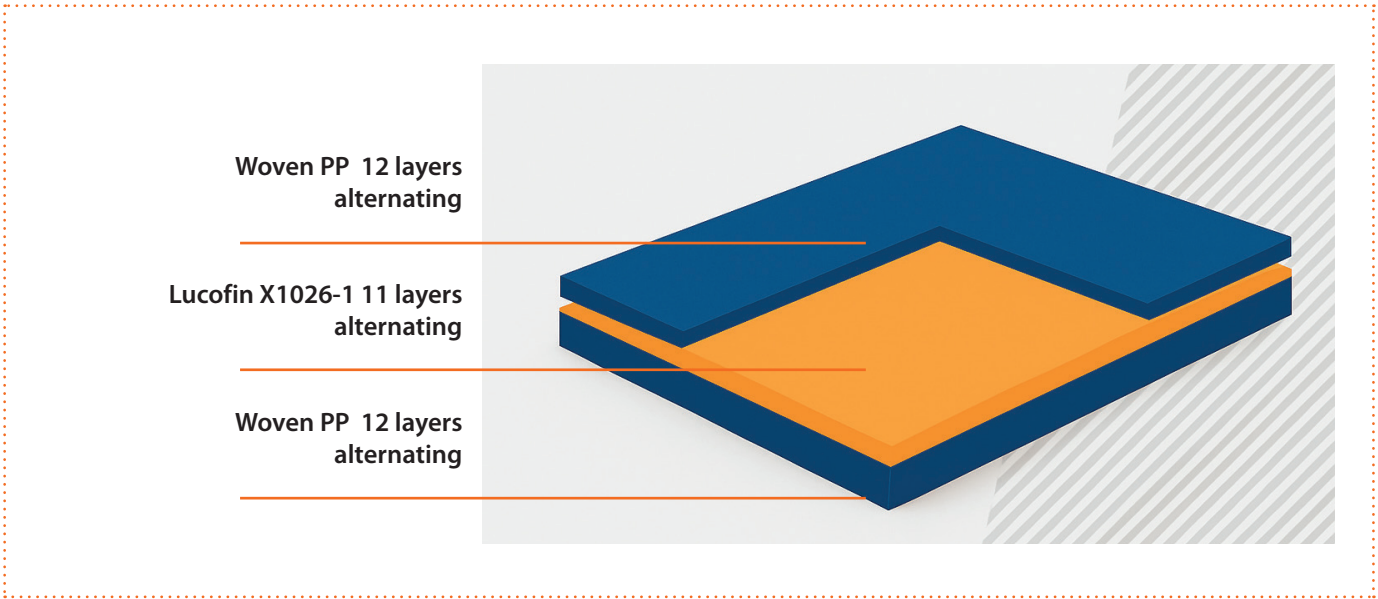
The standard manufacturing process for self-reinforced polypropylene (SRPP) composites relies on coextrusion techniques, in which polypropylene tapes with varying melting points are combined. In this setup, tapes with a lower melting point act as the matrix material, melting during processing and bonding the structure together, while tapes with a higher melting point maintain their form and serve as the reinforcing element. This dual-phase design creates a composite that is lightweight, mechanically strong, and fully recyclable due to its mono-material nature.

Lucofin® offers an innovative and simplified solution for SRPP production by replacing traditional coextruded tapes with a specialized bonding film: Lucofin® X1026-1. This film is designed to act as the matrix material, making it possible to directly bond layers of woven polypropylene fabric in a single, three-dimensional lamination step. The Lucofin® film has a lower melting point and flows during processing, ensuring strong adhesion between the fabric layers while preserving the structural integrity of the reinforcement.

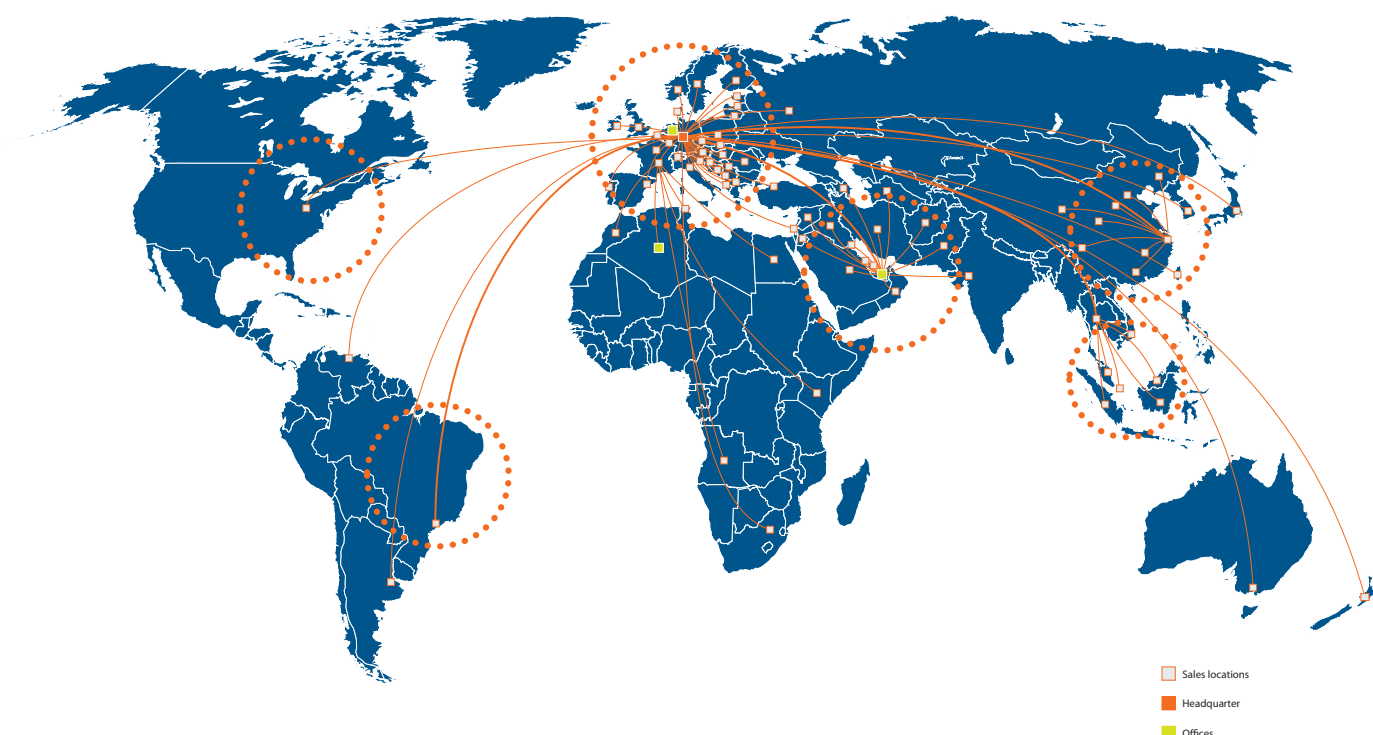
This method significantly reduces the complexity of the SRPP manufacturing process. It eliminates the need for prior tape production and the meticulous tape-laying process typically required before compression molding. Instead, manufacturers can achieve durable composite structures through direct processing with fewer steps, saving both time and cost.

Another key benefit of the Lucofin® solution is thermal stability: the resulting composite maintains its performance at elevated temperatures, withstanding long-term exposure to 90–120 °C without compromising mechanical integrity.

With Lucofin® X1026-1, manufacturers gain access to a cost-effective, efficient, and robust process for producing SRPP composites, ideally suited for applications in automotive, packaging, sports, and construction—especially where lightweight performance and recyclability are essential.



LOCATIONS



LUCOBIT Aktiengesellschaft

Brühler Str. 60

D-50389 Wesseling

Phone +49 2236 37859-0

Fax +49 2236 37859-99

info@lucobit.de

www.lucobit.com

Note

The information provided in this document is based on our product tests and present technical knowledge. It does not release purchasers from the responsibility of carrying out their receiving inspections. Neither does it imply any binding assurance of suitability of our products for a particular purpose. As LUCOBIT cannot anticipate or control the many different conditions under which this product may be processed and used this information does not relieve processors from their own tests and investigations. Any proprietary rights as well as existing legislation shall be observed.