

AZL Joint Partner Project

Thermoplastic Composite Tapes

Global screening and use case identification for
cost and CO₂ reduction in large-scale production
of high-priced injection moulded parts



Thermoplastic tapes offer excellent mechanical properties compared to short- or long-fiber reinforced thermoplastics (SGF, LGF). In particular, glass fiber tapes have already reached a cost level comparable to GF compounds. Carbon fiber tapes, however, still come with a significant cost premium—both compared to CF and especially to GF compounds. In addition to their established use in laminates, thermoplastic tapes can also be selectively integrated in small fractions into injection- and press-molded parts. It has been proven that local reinforcement with just a few percent of tapes leads to significant cost, weight, and CO₂ footprint reduction all without requiring changes to existing production systems. Additionally, this technology supports the use of recycled materials, facilitating compliance with recycling regulations. Together with partners, AZL has developed an method to verify the application's suitability to foster the benefits of the technology.

What will you get?

Insights into the quantified impact of local tape reinforcements on cost, weight and CO₂ footprint for high volume applications manufactured today by injection- and press-moulding. Structural and non-structural applications across all industries, from home appliances to automotive. Usage in the context of design with recycling.

- **WP1:** Market analysis for short-/longfiber reinforced high volume parts, screening and rating of candidates
- **WP2:** Re-design of a large number of candidates including detailed part and process engineering, evaluation of KPI's

Open to join

Kick-off: July 16th 2025

Duration: approx. 7 months



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