

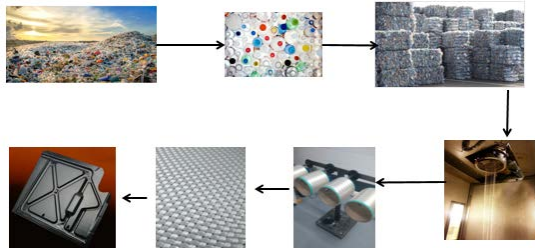


Engineering Materials from Recycled Plastics

Overview



Researchers from the Irish Composites Centre in UL (IComp) have developed a new, technology to repurpose recycled or virgin plastic (e.g. PET) into a self-reinforced polymer composite material suitable for a range of new applications.



The technology aims at recycling plastic bottles (mainly PET) into a high tensile fibre which can then be used in a wide variety of value-added products.

The resultant self-reinforced composites which IComp are developing are

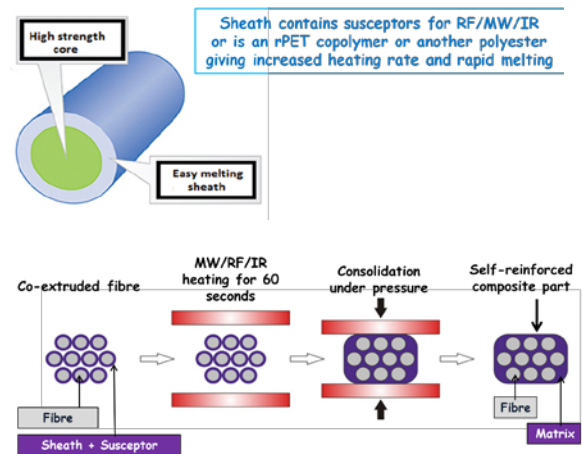
- more energy efficient to process
- will have a lower cost than other products on the market
- significantly greener
- high level of rigidity, strength and temperature performance

The key features of this new technology are;

- Polymer susceptibility can be tailored to facilitate uniform rapid low energy heating
- Cycle time to manufacture of composite parts can be significantly reduced
- Suitable for injection moulding, composite matrices, co-axial fibres, welding, hot-melt & thermally reversible adhesives
- Staple or monofilament high tensile fibres may be spun
- Fibres may be comingled with glass or basalt fibres for extra strength and stiffness
- Metal / composite hybrid laminates / pre-consolidated prepregs can be developed for thermo-forming - susceptors may be strategically placed in panels to heat selected areas

Technology

The technology can use recycled plastic as a base material. Certain susceptor materials are impregnated into the outer layers of the material. The susceptor materials heat when energised through microwave, RF or conventional heating forming a self-reinforced component.



Further information is available at;

- [Article from RTE News website](#)
- [Article from Silicon Republic](#)
- [Video Article from RTE News](#)

Commercial Opportunity

UL is interested in seeking partners to exploit this technology. The Technology is available for license, as the basis of a new Spin Out company and/or as the basis of further development projects.

IP Status

A patent has been applied for in the US and with the EPO.

[Link to Patent Application](#)

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