Natural Fibre Pellet Development

Long natural fibre thermoplastic, injection-mouldable pellets are a composite of natural fibres (e.g. flax, hemp, jute) in a polypropylene matrix. They were developed by Coventive as a cost-effective alternative to long glass fibre thermoplastic (LFT) products in, for example, automotive applications.

Glass fibres are relatively heavy, derived from non-renewable sources and cannot easily be recycled. By contrast, natural fibres are less dense than glass and have a lower environmental impact. They also have a similar stiffness to glass fibres.

The pellet format and method by which they are produced also helps to preserve the reinforcing properties of the natural fibres; these are often compromised in other more aggressive compounding processes.

The technology continues to be refined. Please contact us if you would like further details or to discuss how you might evaluate or deploy the technology.

Can we help you with your Materials & Process Development requirements?

Whether it's thermosetting or thermoplastic composites, biocomposites or nanocomposites, we can help you develop a material or process that meets your requirements.

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LFT Manufacture

The pellets are typically a 50:50 mix by volume of natural fibres and polypropylene fibres. They are currently produced using Coventive’s in-house pilot line at a length of between 5 and 25 mm, depending upon the requirements of the user.

The pellets can then be injection moulded using standard equipment. Because natural fibres are less abrasive than glass, they also generate less tool wear.