Prestige Car Maker Finds Solution to Polystyrene Waste

Rolls-Royce Motor Cars is always looking to be greener and recycle more materials from their production site in Chichester. One waste material that was difficult to recycle was Polystyrene, that was until the company's waste contractor Biffa, found the solution.

Polystyrene is an excellent packaging material due to its insulating and protective properties. Unfortunately, once goods are delivered and opened then polystyrene becomes a waste material that companies must pay to dispose of. Large, bulky pieces of polystyrene can take up significant space in a waste container which means it will need to be emptied more often – and therefore is more costly.

It is conservatively estimated that hundreds of thousands of tonnes of waste polystyrene is produced and sent to landfill on an annual basis. This material takes up a large volume of landfill compared to its weight.

Carl Payne, operations manager from Biffa, is always keen to develop new ways of recycling. According to Carl, "Rolls-Royce Motor Cars produce around 20-40 large polystyrene trays that are used to protect the front grill sections of the Phantom and other chrome parts. At the time the polystyrene would fill three or more waste containers every week."

"Rolls-Royce Motor Cars probably produce around half a tonne of polystyrene per month, which is not a huge amount so it made it unfeasible for recycling companies to collect and recycle. The reason it is unfeasible is that polystyrene is roughly 95% air and only 5% recyclable material. Therefore filling a lorry with polystyrene is disproportionately expensive because of the large volume of space it takes up compared to the small amount of material that can be recycled."

Biffa manage all aspects of waste management in partnership with Rolls-Royce Motor Cars. Carl continued "Biffa's philosophy to managing a contract of this nature is to continually look for new routes to recycle waste. We found an excellent way for Rolls-Royce to recycle polystyrene using a Styromelt machine."

The Styromelt essentially melts polystyrene to form a dense block of material that is reduced in volume by over 95% of the original material. So a two cubic metre load of polystyrene comes out of the machine as a small block 90cm x 25cm x 5cm. The block can be stored and sold to recycling companies who then turn it into fuels or new products such as garden decking.

Carl explains why recycling this material is beneficial, "Firstly, it reduces the cost

of disposing of polystyrene and it frees up a lot of space in the waste containers. It also means we continue to help Rolls-Royce Motor Cars reduce the volume of waste going to landfill and increase recycling rates - all good news for the environment."

Rolls-Royce Motor Cars take pride in their credentials having achieved ISO 14001 certification in April 2003 and maintaining this standard ever since. The manufacturing and headquarters building is a 'sustainability designed' building with a 22,500 square metre 'living roof' planted with thousands of sedum plants.

Waste management is an important process within the company and they segregate all waste via a number of 'waste islands' around the site and have a dedicated 'Recycling Centre' to sort and bale all recyclable wastes.

Carl continues, "Our main objectives are to divert waste from landfill and reduce cost. Biffa and the manufacturer of the Styromelt allowed Rolls-Royce Motor Cars to trial the machine and offered excellent service at a cost effective price. Currently Rolls-Royce Motor Cars are looking to save £2000 - £3000 per year by recycling polystyrene."

"Polystyrene is collected daily and put into the Styromelt machine, once enough is in the machine they can run a melt during the day and the densified blocks are stored until they have enough to send for recycling. At a time when recycling, landfill and the environment are big on the agenda, we hope to make people realise that polystyrene is a waste material that can be recycled effectively."

The Styromelt™ system is designed and built in Rotherham - UK by Purex International Ltd in partnership with Taylor Products of Cardiff. For more information visit http://www.styromelt.com.