

Robert Scott Introduces Industry-first Biodegradable Socket Mop Technology

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[Robert Scott](#) has become the first company in the UK cleaning sector to incorporate a biodegradable plastic additive into its mop socket design. This innovation means that Exel® sockets are designed to biodegrade in managed landfill environments, eliminating the environmental impact of traditional plastic components polluting the planet for hundreds of years.

As Europe's largest mop manufacturer, Robert Scott has long led the way in sustainable design, first re-using waste fabric back in the 40's to manufacture mopheads. Today, Robert Scott manufactures 25 million mops a year in the UK. Of these, the cotton-rich fibre is recycled from 100% post-consumer waste, while the Big White fabric is re-using industrial waste.

A recent redesign to the socket is now saving 137 tonnes of plastic each year. In addition, the socket is made from durable polypropylene (PP); a type five plastic which can be recycled continuously into new products.

However, Robert Scott understands that products that can be recycled aren't always recycled, especially considering regional discrepancies in recycling methods and complexities of waste streams. In many instances, these will be disposed of and can end up in landfill.

That's why Robert Scott is now adding an innovative additive called BioSphere® to Exel® sockets, which speeds up the biodegradation process in managed landfill conditions. Plastics treated with the additive still have unlimited shelf life and are non-toxic.

Reusable, recyclable and now biodegradable

Alastair Scott, sales director at Robert Scott, said: “We scrutinise every component of our products and every aspect of our operations to meet our sustainability commitments. While a mop socket on

its own may seem relatively insignificant, when you consider the 20 to 30 grams of plastic per unit across the millions of mops sold each year, the environmental impact soon adds up.

“We know sustainability is a key concern in the commercial cleaning sector, both for our customers and the end-user. By making our sockets both reusable, recyclable and now biodegradable, we’re helping address this by reducing plastic waste in the sector.”

To biodegrade, the socket is simply added to a managed landfill. The polymer attracts over 600 types of microbes, allowing them to colonise the plastic and begin to break down the polymer chain by utilising its carbon backbone as an energy source.

Put simply, this creates the opportunity for microbes to utilise plastic as food and this process continues until the only remaining element is nutritional, organic soil without the creation of microplastic. Comparing this to normal untreated plastics, which can pollute the planet for anything up to 500 years, it’s an amazing and revolutionary additive.

Independent laboratory tests carried out by Eden Research Laboratory in accordance with ASTM D5511 are ongoing, a commonly recognised test method for assessing biodegradability. After the first 12 months, the sockets have already degraded by 29.6%, which is an incredible performance when compared with untreated plastics that can hang around in the environment for hundreds of years. Tests are ongoing and results will be updated regularly.

A similar technology was added to P-Wave’s Slant6 urinal screen in 2019 – the brand is now distributed by Robert Scott – and laboratory tests demonstrate an 89% biodegradation in just six years. Neither technology uses oxo-degradation additive, and both comply with current UK and EU regulatory requirements.

The Exel® push-fit socket was originally designed by Robert Scott to accommodate different designs of mop handles, while preventing the chance of the mop unscrewing from an Exel® handle when being wrung out. Since its introduction in the 90’s, this innovation has helped the Robert Scott mop to become the market-leader in the UK’s commercial cleaning sector.