

Ground-breaking research promises less waste from textiles

A three-year research and development project conducted by a consortium of industry experts – NIRI Ltd; Gnosys Ltd; Edward Clay & Son Ltd; Yaaparra Ltd; Aestiva Ltd; led by FIRA, the furniture industry body - funded by The Technology Strategy Board, aims to reduce significantly the waste generated by consumers who discard their unwanted clothes into the rubbish bin as well as having significant implications for the manufacture of upholstered furniture.

Known as REDFR (Reducing Emissions by Development of Novel Sustainable Flame Retardant Products), the project aims to develop novel environmentally sustainable nonwoven fabrics composed entirely of recycled fibre material and sustainable flame retardant treatments.

The end products are principally targeted at padding components of furniture, seating and bedding and associated filling materials found in the automotive and transport industries, all of which are required to meet stringent UK flammability regulations.

REDFR boasts a host of ecological benefits, as well as excellent technical performance. The flame retardancy system will be applicable for a wide range of textile fibre mixes, thereby maximising the available material for processing by converters within the textile reprocessing industry. Only 10,000 of the estimated 1 million tonnes of clothes entering the municipal waste stream in the UK are currently recycled. Therefore, the use of materials that are currently discarded could increase dramatically within a sector that is struggling to maintain its feedstock supply routes.

Besides using materials otherwise destined for landfill, REDFR reduces harmful emissions by substituting sustainable alternatives for conventional synthetic flame retardants. The performance of these alternatives will be benchmarked against current industry standards.

Sue Calver, project manager at FIRA says: "Confronted with more than 1.1 million tonnes of discarded clothing, the consortium recognised the need to make use of this untapped resource cost-effectively."

Commenting on the Technology Strategy Board's support, their Lead Technologist for Environmental Sustainability, John Whittall, said: "This is a great example of the kind of sustainable product that we need to develop if we are to respond successfully to the many environmental challenges that we face. Investing in the development of green technology and sustainable products and materials is a top priority for the Technology Strategy Board and we are delighted to support this innovative research project."

Ends

Notes to editors:

The Technology Strategy Board is a business-led executive non-departmental public body, established by the government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve the quality of life. It is sponsored by the Department for Business, Innovation and Skills (BIS). For further information please visit www.innovateuk.org.

Aestiva Ltd. Is a consultancy established to work on novel projects to promote cradle-to-cradle precepts into clothing and fashion. www.aestiva.co.uk

Edward Clay & Son Ltd specialise in the production of fillings for the bedding sector and other areas such as horticulture, packaging, upholstery, and engineering services office2@edwardclay.co.uk

FIRA - The World's Leading Independent Furniture Technology Centre can meet the needs of the complete furniture industry supply chain. www.fira.co.uk

GnoSys UK is a multidisciplinary science and technology company specializing in research support, technical services, innovative materials, product and software development

NIRI (Nonwovens Innovation & Research Institute Ltd) - specialists in the development of commercially viable nonwoven fabrics and products. www.nonwovens-innovation.com

Yaaparra manufacturers of next generation flame/fire retardants made from human foodstuff-chemicals. www.yaaparra.com

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