

Smart Science

## The science of durable materials

Safe and sustainable solutions to meet demand for the latest fashions and extend the reach of clean energy while minimising negative environmental impact

Advances in our specialist ingredients are keeping pace with, and enabling innovation in, a fast-changing world where consumers increasingly focus on the need to reduce, reuse and recycle the products they purchase. This is driving our customers to innovate with sustainability in mind.

We enable more sustainable customer innovations through our bio-based additives which help to produce high quality performance polymers with a negative or low-carbon footprint. Our anti-scratch additives offer durable product design solutions for cutting-edge electronic, automotive and sports products, reducing the need for future repair and replacement. Our smart science is also delivered in our additives, ensuring durability to extend the life of wind turbine gearboxes. This focus on sustainability and durability even applies to the specialist biopolymers we have developed for use in fabric and laundry care, protecting garment fibres to extend the life of modern fabrics.

Rapeseed pollen. Rapeseed oil is a key raw material within our advanced bio-based polymers

to Improve Lives

## Helping to reduce, reuse and recycle

We are supporting the circular economy and durable material design, enabling the growth of clean energy and helping to further reduce negative environmental impact

In our fast-changing world, technology and consumer preferences evolve at pace. Such changes drive the creation of new consumer products, but these can have a short life-span and cause a negative environmental impact if they are difficult to recycle.

Our Performance Technology ingredients help to make materials more durable, longer lasting and efficient, improving the sustainability of our customers' products. Our polymeric materials are key examples of the way we can prolong product life and even reduce defect wastage during production. These align with the global move to a circular plastic economy with our ingredients making production processes more efficient, reducing energy use, increasing the proportion of reusable products and allowing for more recycling.

Our Rewitec™ products improve durability in a market where sustainability is vital. In wind energy applications, where our ingredients extend turbine life and reduce maintenance costs, they deliver significant energy savings and greater carbon benefits. On an individual level, our sustainability focus extends to products helping to reduce the heavy environmental impact of the fashion and textile industry. Our technologies reduce carbon emissions and save water by extending the life of clothing significantly, protecting the fibres of a garment from the fading, greying or pilling that can lead to items being thrown away and replaced, rather than reused or recycled.