Press Release

On the way to a circular economy 13 September 2023

TÜV SÜD: Solutions to mitigate microplastic impacts on the environment

Munich. The issues of environmental protection and sustainability are now more than ever in the focus of the textile industry. One of the most significant challenges facing the industry is the environmental impact of microplastics from textiles, particularly from microfibres made from synthetic textiles. In an effort to minimise these impacts and move towards a sustainable circular economy, TÜV SÜD uses innovative testing methods to reduce the environmental impact of microplastics.

One of the main sources of environmental pollution from microplastics are fibres released from textiles. Nowadays, many garments are made from synthetic fibres such as polyester, nylon and acrylic. When garments made from synthetic fibres are washed, fibre fragments are released and end up in the waterways, polluting the environment. TÜV SÜD is committed to mitigating the impact of microplastics on the environment.

The challenges of the textile industry

The textile industry faces significant challenges, including a dramatic 40% increase in textile consumption in the EU within a few decades[1]. This industry now surpasses even air and maritime shipping in terms of greenhouse gas emissions[2]. In addition, of the more than 1,900 chemicals used in production, 165 are classified as hazardous by the EU[3]. Regrettably, only about one percent of used textiles are recycled into new clothing[4].

Microplastics – invisible threat to the environment

Microplastics in textiles are synthetic fibres less than 5 millimetres long. It is the most common form of water pollution and poses a major threat to aquatic ecosystems and marine organisms. Microplastics

[1] https://epthinktank.eu/2022/05/04/textiles-and-the-environment
[2] https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_802429.pdf
[3] https://www.mckinsey.com/industries/retail/our-insights/biodiversity-the-next-frontier-in-sustainable-fashion
[4] https://www.cbi.eu/market-information/apparel/recycled-fashion/market-potential

from clothing, especially from washing synthetic textiles, is one of the main causes of this pollution[5]. In fact, 35 per cent of synthetic fibres in the ocean come from textiles, and between 124 to 308 mg/kg of synthetic fibres are released annually during washing, totalling about 40,000 tonnes of synthetic fibres[6].

The environmental impacts

Microtextiles contribute significantly to microplastic pollution, as the majority of today's clothing is made from synthetic materials such as polyester, nylon and acrylic. These microfibres, which come off synthetic clothing when washed, are the most widespread form of microplastic in the environment and affect ecosystems worldwide. Statistics show that they endanger, for example, 52 per cent of sea turtles, 90 per cent of seabirds, 100 per cent of coral reefs and 96 per cent of all biodiversity[7].

How testing for microplastics can help

Tests for microplastics play a crucial role in determining the release of microplastics from textile products and materials. They contribute to a better understanding of the environmental impact of products and help to proactively shape legislation by identifying the amount of microfibres that enter our waters from different textile fabrics and fibres. This makes it possible to reduce microplastic pollution through a conscious choice of raw materials and to ensure that sustainability promises are met.

TÜV SÜD testing services for microplastics

TÜV SÜD is actively involved in the fight against microplastic pollution and is working to make the textile industry more environmentally friendly. The company offers test methods, including AATCC TM212-2021 and ISO 4484-1:2023, to determine the release of fibre fragments when washing textiles.
TÜV SÜD develops innovative microplastic test methods to assess the microfibre shedding potential of commercially available synthetic textiles. With a recognised track record in quality assurance and extensive knowledge in testing textile products, TÜV SÜD helps to achieve better product quality.

Softlines at TÜV SÜD

TÜV SÜD has a global network of around 25 testing laboratories for leather and textiles. Its services range from physical tests to chemical analyses. The TÜV SÜD experts offer product testing as well as on-site pre-shipment inspection, and provide auditing and certification in accordance with all leading national and international standards. TÜV SÜD thus supports manufacturers, exporters and purchasers worldwide, helping them to reliably meet all quality and safety standards.

[5] https://www.iberdrola.com/environment/microplastics-threat-to-health
[6] https://www.epa.gov/trash-free-waters/what-you-should-know-about-microfiber-pollution
[7] https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Plastik/WWF-Impacts_of_plastic_pollution_in_the_ocean_on_marine_species__biodiversity_and_ecosystems.pdf

Further information:

- Textile and clothing testing and certification
- Microplastics and textile fibre testing at TÜV SÜD
- Infographics microplastics from textiles

Note for editorial teams: This press release can be downloaded from www.tuvsud.com/newsroom.

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