



**Add value.  
Inspire trust.**

## Microplastics and Textile Fibre Fragments Testing

### Your challenges

Fibre shedding from textiles is a major source of environmental pollution. Many clothes today are made from synthetic textile fibres, among them polyester, nylon and acrylic. However, when these fabrics are washed, fibre fragments fall away, leading to aquatic pollution.

The microplastic component of each fibre cloth disrupts water ecosystems. Microplastics in the ocean have been found in shellfish and other organisms. Among microplastics' effects, the contamination of the food chain has the most impact on humans.

### What are microplastics?

In the textile sector, microplastics are commonly referred to as tiny synthetic fibre fragments less than 5mm in length and are shed by textile materials during domestic and industrial wash cycles.

Fragments from these non-biodegradable textile fibres enter our waterways, accumulating harmful chemicals before entering the food chain and drinking water. This could pose a serious harm to the environment and all organisms living underwater.

### What actions have been taken against microplastic pollution?

Several nations have taken a proactive stance against this problem within the textile industry, among them are European Union and the United States.

- **France:** A law proposed that each new washing machine must be equipped with a filter to catch microplastics that break off during washing. France also imposes the disclosure of information on the presence of microplastic fiber in the textile products such as clothing, linen, and footwear.
- **EU:** The EU strategy for Sustainable and Circular Textiles aims to tackle microplastics pollution by focusing the prevention and reduction measures on the following:
  - Design requirements (under Ecodesign for Sustainable Products Regulation)
  - Manufacturing processes
  - Pre-washing
  - Labelling and the promotion of innovative materials
  - Options include washing machine filters
  - Improved wastewater and sewage sludge treatment, etc.
- **US:** The Environmental Protection Agency (EPA) addressed the issue through their Trash Free Waters Article Series, which covers, among others, tips on reducing the influx of microplastics into waterways.

## What microplastics testing services are available to me?

TÜV SÜD has designed microplastics testing services according to:

### • AATCC TM212-2021

Test method for fibre fragment release during home laundering

### • ISO 4484-1:2023

Textiles and textile products — Microplastics from textile sources — Part 1: Determination of material loss from fabrics during washing

## Your business benefits

As consumers are becoming more environmentally conscious, undergoing microplastics testing will help you better understand the impact of your products on the environment.

Our microplastics testing helps companies and manufacturers stay ahead of legislation by identifying the amount of microfibrils released by different textile fabrics and fibres into our waterways.

It also enables you to proactively reduce microplastic pollution through informed raw material selection, therefore ensuring your sustainability claims are true.

## Why choose TÜV SÜD?

As TÜV SÜD is an internationally accredited testing certification body, you can be assured that we conduct our testing with the highest degree of professionalism and conformance to international guidelines and standards. Our international network enables us to offer certification and auditor engagement services on every continent certifying organisation's compliance on a global scale.

## Add value. Inspire trust.

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Through more than 25,000 employees across over 1,000 locations, it adds value to its customers, inspiring trust in a physical and digital world.

## Related services

### TÜV SÜD provides the following related services

- Chemical safety of raw materials and products (based on RoHS, POP, REACH regulations)
- Chemical safety of process chemicals according to ZDHC (Zero Discharge of Hazardous Chemicals) MRSL
- Chemical safety of wastewater and sludge according to ZDHC guidelines
- Biocompatibility, ecotoxicity, microbiological testing
- Packaging biodegradability testing and certification
- Recycled content verification and certification
- Higg Facility Social & Labor Module (Higg FSLM) verification
- Higg Facility Env. Module (FEM) verification
- Corporate social responsibility (CSR) audits: SA 8000, BSCI, WRAP, SEDEX (ETI), RBA
- Reliability and performance testing: weather resistance, colour fastness, shoe flexing, sole abrasion, and more

