Microfibre Testing Services by TÜV Rheinland

The textile industry has shown a growing awareness of the issue of fiber fragmentation. Next to being damaging to wildlife and ecosystems, there are concerns about the health risks posed to humans due to their physical presence and their ability to carry other harmful chemicals.

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THE MICROFIBRE CONSORTIUM

Founded in November 2018, The Microfibre Consortium (TMC) now has more than 100 signatories from across the outdoor sector, sports, high street, luxury fashion and home textiles.

TMC's vision is to work towards zero impact from fibre fragmentation from textiles to the natural environment. They work to connect and translate deep academic research with the reality of commercial supply chain production.

TMC also has a rapidly growing network of research institutions and affiliates from around the world, supporting the consortium's mission for research to understand and reduce microfibre pollution.

The problem is clear: microfibres have the potential to harm the environment, wildlife and people through their presence in our ecosystems from marine and freshwater environments to air and soil.

THE MICROFIBRE 2030 COMMITMENT

Shared by all signatories –included us, TÜV Rheinland – our global commitment is to strive towards zero impact from fibre fragmentation from textiles to the ecosystem by 2030. Brands, retailers and research signatories share an obligation to submit the outputs of materials testing each year, uploading their test results and technical specifications to The Microfibre Data Portal.

THE MICROFIBRE ROADMAP

The roadmap sets the pace of activity for working on The Microfibre 2030 Commitment. The Microfibre Roadmap details the path forward and the specific steps we will take to meet our commitment, however, it is not set in stone, and will evolve as knowledge and tools develop.

TÜV Rheinland is a signatory and an accredited laboratory to measure microfibre loss.

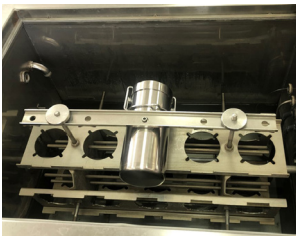
TMC TEST METHOD

The TMC Test Method is a harmonized and validated test method to quantify fibre release from fabrics during simulated domestic laundering.

Steps of the test method:

- Preparation of test specimen (by cutting and then hemming).
- Drying the specimen, filter and tray.
- The initial dry mass is recorded.
- Steel balls and distilled water is added to wash canisters, then preheated.
- Specimen is added to each canister, then laundered for specified time and temperature.
- After the laundering, the wash liqour is poured into beakers.
- The canister, lid, seal, fabric specimen and steel balls are rinsed into beakers.
- By using a vacuum pump, the wash liquor is filtered through the filtration device.
- The filter then returned to specimen tray and dried in an oven.
- The dry mass of each filter is recorded.

By the end of the test method, the fibre release is expressed as a percentage by mass.



Laundering procedure in steel canister

Filtration procedure first step: vacuum pump filtration

Filtration procedure second step: drying of the specimen trays

HOW TÜV CAN SUPPORT YOU?

- As a TMC signatory, TÜV Rheinland can contribute to precise research data on fibre shedding/fragmentation to build a better understanding of this issue.
- Our textile testing laboratories in Shenzhen, Shanghai (China), Tamilnadu, Haryana (India), Bangladesh and Alfreton (UK) are approved to conduct tests for quantifying fibre loss from fabrics during domestic laundering.
- Our textile testing experience and expertise will support TMC's brand, retailer and supplier members with standardized testing services and reliable results.
- With our comprehensive testing services, we can help you to improve your business's sustainability along your supply chain.
- TÜV Rheinland textile testing services can assist you to better perceive the environmental impact of your products and to stay a step ahead of legislation regarding fibres and fabrics.

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