

Microplastics from textiles

Did you know?

What does it mean?

- **Microplastic**¹: Plastic fragments, particles, or fibers between 1nm and 5 mm in diameter.

Note: No legal definition currently exists - EU regulatory work is ongoing.

Ø 1nm - 5mm

- **(Textile) fiber**: A flexible, fine unit of matter with a high length-to-width ratio, suitable for textile use.

- **Fibre fragment**: A short piece of textile fiber.

Note: Fibre fragments are of concern as aquatic pollutants as they are often mistakenly called “microfibers.”

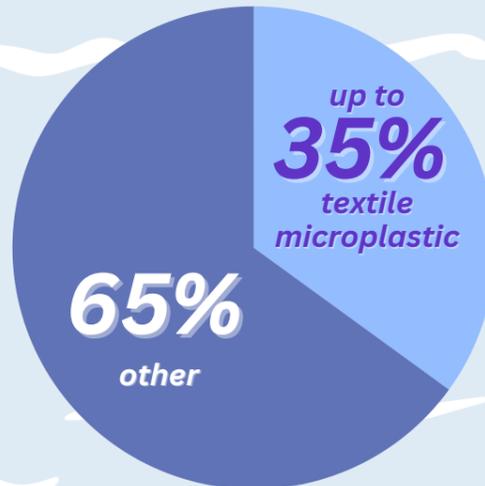
- **Microfiber**: Typically a textile fiber with linear density under 1 decitex or diameter under 10 micrometer(µm).

Note: 1 micrometer is equal to 1 millionth of a meter

Primary microplastics released directly from textile products: during production, washing, or wearing of synthetic textiles⁴



Each person releases about 25 grams of textile microfibers to surface waters every year⁴



Synthetic textiles contribute about 8 % of Europe’s microplastics entering oceans, and 16–35 % globally⁴

Some research suggests **a sustainability trade-off**⁶ as recycled polyester releases more microfibers



Some studies highlight that the majority of fiber loss occurs during the first ten washes, particularly in synthetic clothing.^{2, 3}

Further studies are needed.

Over 14 million tonnes⁷ of microplastics have accumulated on the ocean floor, with amounts increasing annually

14 million tonnes

References:

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3. Klinkhammer, K., Kolbe, S., Brandt, S., Meyer, J., Ratovo, K., Bendt, E. & Rabe, M. (2024). Release of fibrous microplastics from functional polyester garments through household washing. Frontiers in Environmental Science, 12, 1330922. doi:10.3389/fenvs.2024.1330922