

It's Raining Microfibres

by Clean Sailors Crew



In our last plastics feature, we talked about Microplastics; how all plastics break down into tiny, microscopic pieces over time. Because plastics are durable and don't biodegrade, they stay circulating in our environment for decades and decades. We found that our seas and waterways are full of them, and recent research has even found microplastics in our bloodstream.

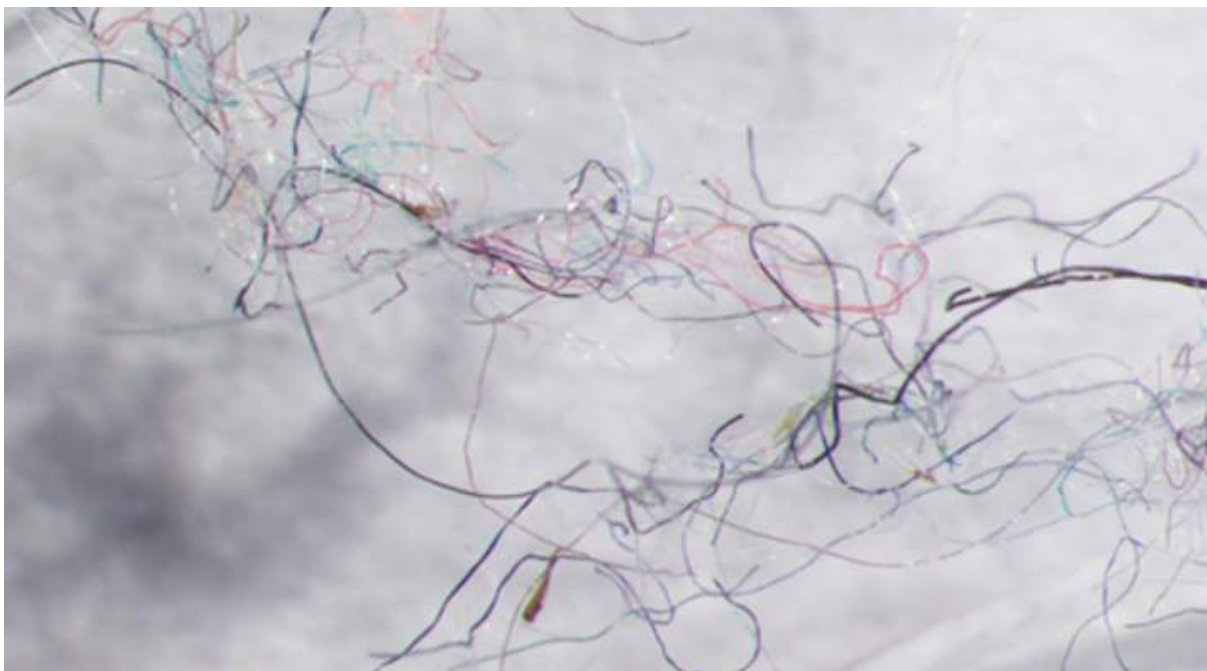
Microfibres are *slightly* different but, as the name suggests, still tiny and make up around 35% of microplastics found in our environments.

What are Microfibres?

Well, microfibres come from our clothes, and each time we wear or wash them, these tiny particles get released. Sometimes you can see larger fibres floating in the air or sticking to your laptop screen, like dust.

Humans have been wearing and washing fabrics for hundreds of years, so why is this an issue now?

Good question... Traditionally, clothes were made from natural materials such as cotton and wool. Now, modern fabric manufacturing sees many of our clothes made from lightweight, durable, man-made, synthetic materials such as polyester, nylon, polyamide and acrylic. Whilst revolutionary, these materials are all types of plastic. So, when we wear or wash our clothes, we are actually releasing tiny particles of plastic into our environments; the air and water around us and through our ecosystems.



Research shows that in a single clothes wash, ~700,000 microfibres are released. Now think about all the washing machines on spin each week, across the world. That is roughly ~9.4million tonnes of plastic bits heading down the drain in our washing wastewater, every 7 days.

Why are Microfibres an issue?

Microfibres are a big issue, for a couple of reasons:

1. **Volume**

Never before have we made and consumed so many clothes, often termed 'fast fashion'. The majority of these items are made almost entirely of

synthetic of plastic-based materials. When we wash our (synthetic) clothes, we are releasing huge amounts of plastic microfibres into our wastewater. These clothes are often less durable and are not 'made to last' meaning new clothes are made quicker than ever before.

2. **Hard to catch**

Being so tiny, microfibres are hard to catch in traditional sewage treatment and filtration systems, and therefore end up in our waterways and oceans, and even back into our household water supply, used for our drinking and cooking water.

3. **Particles of plastic**

Microfibres are tiny particles of plastic, and therefore contribute to plastic pollution in the air and in our waters.

- A huge proportion of microfibres head out into the environment where they are often eaten by other species, such as fish. Studies show that mussels ingest microfibres as they filter water, and around 63% of all shrimps caught in the North Sea, for example, contain microfibres. We then eat these fish, thereby ingesting microfibres, too.
- Microfibres also make it back into our homes in our water supply. Because microfibres are too small to catch in our traditional sewage and filtration systems, they get recycled back into our water which we use for cooking and drinking. In fact, studies have shown 83% of drinking water worldwide contains microfibres, both bottled and tap water.

Microfibres are so small, light and easily transported that they have even been found in the air, in falling rain and in snow. Research by the U.S Geological Survey concluded simply by saying "It's raining plastic", underlining just how commonplace these particles now are, across our planet.

Scientific research is yet to conclude *exactly* the impact that microfibres and microplastics have on our bodies as we absorb them into our systems, however early research on other species including coral, shows that the chemical ingredients that make up plastic particles get leached out into the

environment over time, and that bacteria and viruses collect and are transported on the surface of these plastic pieces as they travel through ecosystems.

Microplastics and microfibres definitely don't belong in our water, our air, environment, our food, or in us - we've got work to do in keeping them out!

What we can do

Whilst the most sustainable option may be to not wash our clothes (!), the next best option is to make sure we catch our microfibres before they head out in our wastewater.

There are a couple of things we can do, at home and on our boats, to help minimise us releasing our microfibres into the environment.

1. **Choosing natural as far as possible**

Opt for natural materials, such as sustainable cotton, wherever possible.

2. **Wear more, wash less**

Wear items as much as possible before putting them in the wash.

3. **Washing cooler**

Hot washes break down threads far more easily than cooler washes. Aim for 30 degrees!

4. **Using filters on our boats**

Anything flushed down the drain on our boats heads into the bilge and straight out into the sea.

We can also make sure we keep our seas clean by catching all nasties in our wastewater. See [Wave International](#) for more information on their bilge water filters.

5. **Using washing bags or balls**

Pop items in a washing bag or use a ball in your machine, to stop microfibres heading out in the wastewater.

We've tried:

- Guppyfriend
- Cora ball

A top tip is that new clothes create greater amounts of microfibres when washing, so prioritise these items in your Guppyfriend bag – you can also opt for a plastic free liquid detergent (such as SMOL) instead of tablets or powder detergent as these rely on less abrasive techniques to wash your clothes and produce less microfibres in the process!

6. Call for the right legislation

The best and consistent way for us to limit microfibres heading into our waters is through washing machine filters.

In this feature, we are proud to support the Marine Conservation Society (MSC), who are working to encourage legislation around filters in our washing machines by 2024. Although a few years away, this would be a great way to ensure that plastic fibres from every wash are caught.

See the MSC campaign #StopOceanThreads here and to sign the petition for washing machine legislation, here!

Clean Sailors supports – we hope you will, too!