

# PFAS Fact File



## What are PFAS?

Harmful chemicals are polluting the planet, wildlife and people. PFAS or 'forever chemicals' are just one group of ocean poisons. But what are they and what can we do to stop them?

PFAS – the 'S' stands for 'substances' – are a group of thousands of chemicals that have the following factors in common:

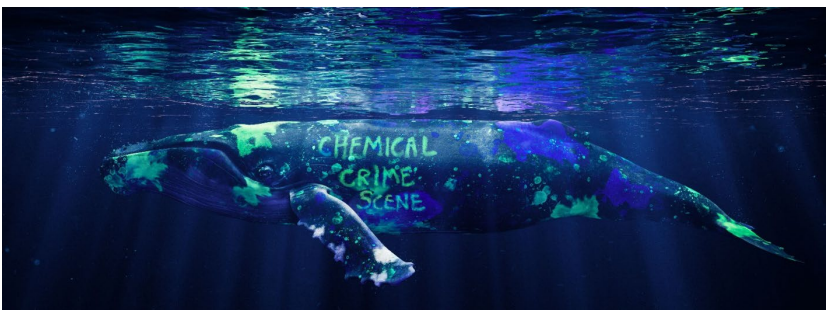
- Made up of a Carbon-Carbon backbone
- Strong, persistent Carbon-Fluorine bonds
- They don't react with air, water or grease, are flame retardant, and can withstand high temperatures
- Water soluble

'Forever chemicals' have become part of modern manufacturing to the point that they're included as the default option and incorporated into our clothes, food packaging, cars and electronics, alongside the processes which produce them.



## The problem

Unfortunately, these chemicals are used in so many different products around the world that they're ending up in the environment, and because they're so resistant to water, grease, heat and chemicals, they aren't breaking down naturally.



Credit: Marine Conservation Society

## Definitions:

(in relation to PFAS)

### PFAS

per-fluoroalkyl and poly-fluoroalkyl substances, better known as 'forever chemicals,' are a group of thousands of individual, but similar, chemicals. They're used in countless products and manufacturing processes.

These chemicals are **persistent**. They have staying power, meaning that they don't disappear – ever. Instead, they build up over time.

As they're water soluble, they're **mobile**. They're easily transferred through the environment, within food chains and through animals nurturing their young.

Forever chemicals have been found in **all water** across the world, including rainwater and ocean spray

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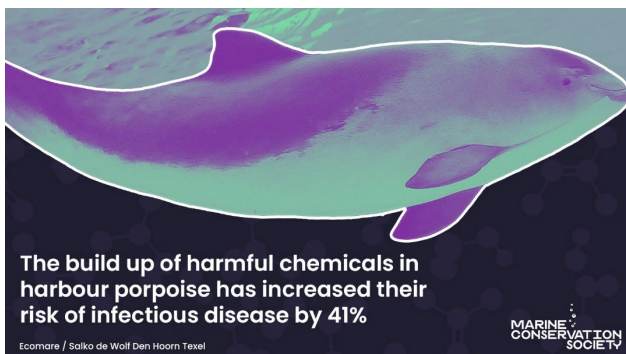
## How do PFAS enter the ocean?

'Forever chemicals' are used in abundance in industry and manufacturing. Therefore, any waste or excessive runoff from these industries can enter our waterways and start the journey towards the ocean.

At present, our water treatment does not remove PFAS from wastewater or sewage treatment. It's currently impossible to remove them from the environment, and they've been found everywhere from the North to South Pole, from dolphins to seals and seabirds.



## Impacts on marine wildlife



Research has proven links between harmful chemicals and the health of animals, including harm to animals' nervous systems, immunity and ability to reproduce, alongside reducing their resilience to other stressors such as climate change and disease.

This is just the tip of the iceberg, with more studies on the long-term effects of chemical pollution published regularly. Research is showing the frightening real-world consequences of inaction on chemical pollution on our blue planet.

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## What are PFAS found in?

The question should be, what *aren't* PFAS found in?

PFAS are present in the products we're using every single day, hour, and minute. Harmful chemicals are used in everyday products, with the consequences allowed to go unchecked.

<b>Non-stick cookware</b> 	<b>Food packaging</b> 	<b>Water-resistant</b> 	<b>Cosmetics</b> 
<b>Cleaning products</b> 	<b>Electronics</b> 	<b>Recreation equipment</b> 	<b>Textiles &amp; upholstery</b> 
<b>Paper &amp; packaging</b> 	<b>Paints, inks, &amp; varnishes</b> 	<b>Sealants &amp; adhesives</b> 	<b>Greases &amp; lubricants</b> 
<b>Fire fighting foam</b> 	<b>Pesticides</b> 	<b>Stain-resistant</b> 	<b>Industrial production</b> 

Credit: Marine Conservation Society

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## Take action

This topic is overwhelming, but solving this chemical crisis isn't on your shoulders – the responsibility ultimately lies with the UK Government.

In most items, PFAS aren't labelled so you have no idea where they are. Through urgent and ambitious action, legislation can and will limit and regulate the use of chemicals to ultimately protect people and planet.



## We must act now

The UK Government is currently allowing the use of these harmful chemicals. This must stop and we need your help to make it happen.

There are too many PFAS for individual bans to be introduced one at a time. With new chemicals being developed all the time, it would take generations to achieve, whilst PFAS continue to accumulate in the ocean and marine life.

Therefore, we're calling for an immediate ban on all PFAS from non-essential uses.

- Add your voice to our petition at [mcsuk.org/stop-ocean-poison](https://mcsuk.org/stop-ocean-poison)
- Email your local politician to support the campaign by pushing for action on chemical pollution at Westminster
- Share the campaign and speak to your family and friends about the ocean pollution problem