



PFAS

BUSTED! Five industry myths about the PFAS ban

Shout so loud that nobody can think clearly. This seems to be industry's tactic for stopping the EU's PFAS ban. As manufacturers turn up the volume, we examine five key myths behind the propaganda.

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As decision time gets closer, industry opposition to the EU's proposed ban on PFAS substances is getting louder. Powerful PR teams are pumping out the message that the

world will end without PFAS.

If you go through the thousands of pages of [industry responses](#) to the proposal, you will read that there will be famine and environmental catastrophe, hospital patients will die, aircraft will fall out of the sky and society will collapse without PFAS.

One British company, for example, says that a ban will have “A HUGE NEGATIVE IMPACT WORLDWIDE”, destroying “BILLIONS IN WORLDWIDE TURNOVER” and leading to “MILLIONS OF JOB LOSSES, UNIMAGINABLE CONSUMER IMPACT”. (Yes, the response is all in capital letters.)

Not all companies are quite so dramatic. But their messages have been published or broadcast so often that they are assumed to be common knowledge.

That doesn’t make them true. Here are five of the most frequently repeated industry claims about the PFAS ban — and why they are simply false.

In what follows, we refer to the substantial research underlying the proposed ban as “the PFAS dossier”. It can be found online [here](#).

1. PFAS needed to stop climate change

Industry goes all out on this one — and who can blame them? Climate change is one of the most pressing issues of our time and a top priority for the EU. Playing “the climate change card” seems like a good strategy to get policymakers second-guessing a PFAS ban.

This statement from the [American Chemistry Council](#), a US chemical industry trade association, is just one of many examples of this argument:

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... take us to a clean energy future, such as solar panels, wind turbines, green hydrogen, and batteries for electric vehicles and energy storage. [They] are critical to accomplishing clean energy goals.”

But let's look at the technologies listed above one by one — and add one more just for the fun of it. In each of these cases, we will see that many commercial alternatives to PFAS are either available or in development.

Solar panels

PFAS in the form of fluoropolymers are currently used in the “backsheets” of solar panels to protect them from the weather. But when solar panels reach the end of their life and are incinerated or dumped in landfill sites, these PFAS substances [enter the environment](#) – not to mention the PFAS that are [used and emitted](#) during the manufacture of the fluoropolymers themselves.

Are there no safer alternatives? Sure there are! Companies such as Endurans, Crown, Solarge and Futurasun have been producing PFAS-free solar panel backsheets with equivalent cost and performance for [more than 15 years](#). Leading Chinese suppliers are [also developing PFAS-free alternatives](#).

Wind turbines

Fluoropolymers are used on the towers and blades of wind power generators. However, the PFAS dossier found “[strong evidence](#)” that technically and economically feasible alternatives exist. In fact, such alternatives are already being used by the world's largest turbine manufacturer, [Vestas](#).

Another application of PFAS in wind turbines is switchgear, which requires an insulating gas to prevent sparks from causing fires. Again, PFAS-free alternatives are [already used](#) by several major switchgear manufacturers, who state: “Our choice is clear: we want to switch gears for net zero, for zero F-Gases [PFAS] in switchgear.”

Green hydrogen

Fuel cells use hydrogen to produce clean electricity or create hydrogen for energy storage. They currently rely on PFAS membranes. Recent developments, however, demonstrate that high-performance membranes without PFAS can be made using [hydrocarbon-based](#) and [cellulose-based](#) materials.

The PFAS dossier judges that there is already “sufficiently strong evidence” of adequate alternatives. However, it also recognises that the industry might struggle without more time to adjust. It therefore [proposed](#) a 5-year derogation (Brussels

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Batteries

PFAS can perform several functions in lithium-ion batteries, but the battery industry's trade association in Europe, RECHARGE, has itself [admitted](#) that alternatives do

exist. Indeed, companies are already producing PFAS-free lithium-ion batteries — among them Leclanché and GRST, while Nanoramic manufactures electrode material.

The main argument is rather that the industry needs more time to adjust, which the PFAS dossier seems to agree with, at least to some degree, concluding that it is uncertain if PFAS can be rapidly substituted in *some* battery applications. Given the lack of commercialised alternatives for these uses, there is probably a need to delay prohibition for a specified period. *But there is certainly no need for a blanket derogation for lithium-ion batteries.*

Heat pumps

Heat pumps are important for cutting our dependence on fossil fuels, but many currently require fluorinated gases, aka F-gases, many of which (such as CFCs and HFCs) have already been banned since they are powerful greenhouse gases that contribute to the climate crisis.

Industry proponents have no problem with this. Instead, they are promoting “climate-friendly” F-gases. The only snag is that these fluorinated gases break down into PFAS chemicals in the environment, such as TFA, which is already present in much of Europe’s water [at high concentrations](#).

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In this case, there are many [commercial alternatives](#) to choose from, some of which are both more efficient and cheaper. These include ammonia, propane and even carbon dioxide, all of which have been in use for a long time and have proven viability.

 **BUSTED! In the face of hard facts, the industry argument that we can't fight climate change without PFAS melts away like a glacier under the polar sun. Don't believe the hype: commercial alternatives exist for all the purposes listed above by the American Chemistry Council, and where there is some doubt, the PFAS dossier explicitly recommends derogations.**

2. No PFAS = no medicines

This is an issue where industry has fostered uncertainty and confusion. Let's be honest, who wouldn't think twice before banning chemicals used to make important medicines or medical equipment?

For example, the European Federation of Pharmaceutical Industries and Associations (EFPIA) [states](#) that "a proposed restriction on the use of [PFAS] could see the widespread shut down of medicines manufacturing ... with a significant number of critical medicines no longer available, impacting patient access to medicines".

But is this true? No. The dossier clearly states that PFAS used as active ingredients in medicines should be excluded altogether from any ban. As for medical devices and equipment, the dossier suggests derogations for a host of medical products, such as catheters, membranes, fluids, bandages, packaging and tubes.

The dossier is less clear regarding the use of PFAS substances in the process of synthesising medicines. This raises the possibility that a derogation may be necessary for the manufacture of pharmaceuticals, which ChemSec believes should be addressed by the current consultation process.

 **BUSTED! You won't die in agony because you can't get the**

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restriction
makes generous exceptions for medicines and medical devices.

3. The bad ones are already banned

With tens of thousands of PFAS chemicals on the market, industry proponents make the case that it's downright unfair to put them all in the same box. Moreover, the bad apples have already been banned, they say.

"There are various types of PFAS, each with different properties... Among the various PFAS chemicals, PFOS, PFOA, PFHxS, and their salts and related substances are subject to prohibitions or restrictions on their manufacture, use, and import/export," says [Daikin](#), one of the world's largest PFAS manufacturers.

Although it won't say that these banned substances are dangerous (the PFAS industry generally refuses to do so), Daikin's implication is that the dodgy PFAS are no longer around.

While it is true that not all PFAS are equally toxic, the fact that they (or their degradation products that are also PFAS) do not break down in nature is *in itself* cause for concern. Persistence leads to increased concentrations, which leads to levels that will eventually have effects, so even less toxic PFAS will impact human health and the environment over time.

Moreover, the more we know about PFAS molecules, the more hazard endpoints they show. More data is leading to a stronger consensus. And mixtures of different types of PFAS compounds are likely to be [more toxic](#) than single chemicals taken in isolation.

Finally, the bad ones – those where health concerns [are most acute](#) – have by no means gone away. Only a tiny handful of PFAS chemicals have been restricted so far, often in the face of concerted industry opposition. Industry giants fought these bans and resisted regulation, despite [knowing about the effects](#), so how can we trust them now? For example, the European Chemicals Agency recently found that 6% of cosmetics [contain banned substances](#), more than half of which are PFAS.

The only way to effectively ban such a huge group of chemicals is through a group-based approach. Otherwise, we will continue to have a lot of "regrettable substitutions" on our hands and legislation won't be able to keep up.

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disease altogether. Even if all PFAS substances were banned

tomorrow, the world will still be cleaning up the mess they have made for decades.

4. The OECD says don't worry

The claim that the OECD, a respected international organisation, views fluoropolymers as “low concern” is repeated more than 700 times (!) by companies in their responses to the PFAS ban. For this reason, they claim, ALL fluoropolymers should be exempt from the ban.

Numerous PFAS manufacturers even got together and wrote [a joint statement](#): “An OECD work group concurred that polymers of low concern have insignificant environmental health and human health impacts. ... [Fluoropolymers meet these criteria for polymers of low concern. They are therefore] a distinct and different group of PFAS and should not be grouped with other PFAS for hazard assessment or regulatory purposes.”

But this, friends, is nothing but another annoying myth. There are no such OECD criteria, and there have never been. “We have not established an agreed set of criteria for polymers of low concern,” Dr. Eeva Leinala, the OECD’s principal administrator for environmental health and safety, [stated](#) earlier this year. The OECD has also attempted to clarify the situation on its [website](#).

So, how has this misunderstanding come about?

In 2009, An OECD Expert Group on polymers did indeed look at the evidence for the health or environmental impacts of fluoropolymers. However, it found “weaknesses or inadequacies” in existing data and methodology, and “data on a broad range of health endpoints were not available for most polymers”. No analysis of specific toxicological effects could be “meaningfully conducted”, the expert group stated*. Since then, the OECD has not done any further work on this.

 **BUSTED! It's fake news, folks! The OECD's “fluoropolymers of low concern” is nothing but the self-hypnosis of the fluoropolymers**

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has no

clothes. The earth is not flat. Father Christmas does not exist. Get over it.

** The 2009 report is no longer online but is available from the OECD. It is entitled: Data analysis of the identification of correlations between polymer characteristics and potential for health or ecotoxicological concern. OECD Task Force on New Chemicals Notification and Assessment, Expert Group Meeting on polymers, March, 2007, Tokyo, Japan.*



Fluoropolymer Myth Busters

Myth: ✗

Fluoropolymers are replaceable by other products in a variety of cases with no undesirable outcomes.

Fact: ✓

Fluoropolymers are non-replaceable in many critical applications as their unique combination of exceptional properties and durability cannot be matched by other materials or polymers. **Currently, no alternatives to fluoropolymers are available that can provide the same advanced performance, durability and safety.**

The self-hypnosis of the fluoropolymer industry (above)

5. There are no alternatives to fluoropolymers

A go-to industry argument to continue with business as usual is to claim that there are no viable alternatives for whatever chemical is in question. Industry proponents know very well that EU policymakers place a lot of weight on this aspect of the restriction

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As a British manufacturer of fluorocarbons [puts it](#) : “There are currently no viable alternatives to fluoropolymers that [are] so vital to the sectors and industries they serve and the world at large”. And just look at the “myth buster” campaign from the

Fluoropolymer Product Group, a European trade association (see their image above). It should be called their “myth maker” campaign.

But: surprise! There are many existing alternatives to fluoropolymer plastics. Some of the most well-known are polyetheretherketone (PEEK), polyamide polymers, and ultra-high molecular weight polyethylene. The PFAS restriction dossier contains detailed discussions of whether and how these alternatives might be introduced.

The dossier also recognises the complexity of replacing fluoropolymers and proposes lengthy transition periods of up to 12 years for certain uses. These include a range of medical devices, military applications, and safety-critical applications in the aviation sector, to name just a few.

🌟 BUSTED! “There is no alternative” has been the battle cry of countless lost causes that ended up on the wrong side of history. Right now, history is moving inexorably towards a comprehensive ban on PFAS substances, with some time-limited exceptions. Repeating “there is no alternative” is like King Cnut trying to command the sea. The tide is coming in, regardless. Be prepared to get wet.

*Correction: This text has been modified to reflect the fact that the ECHA did not find banned PFAS in 6% of cosmetics, as originally stated. ECHA found that 6% contained banned substances, *more than half of which* were PFAS.*



An independent non-profit organisation that advocates substitution of toxic chemicals to safer alternatives.

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