

PVDF MEMBRANES

CUSTOMER FAQ

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FREQUENTLY ASKED QUESTIONS (FAQ)

PVDF MEMBRANES, PFAS AND BLUE FOOT IPC® MEMBRANES

1 IS PVDF CONSIDERED A PFAS?

Under some broad regulatory definitions, PVDF (polyvinylidene fluoride) falls within the fluoropolymer family and can therefore be included in PFAS classifications. However, PVDF is fundamentally different from the low-molecular-weight PFAS compounds, such as PFOA and PFOS, that originally drove most environmental and health concerns. Scientific literature describes fluoropolymers as high-molecular-weight, insoluble, non-mobile, non-bioavailable and non-bioaccumulative materials. [\[academic.oup.com\]](https://academic.oup.com)

2 IS PVDF CONSIDERED A POLYMER OF LOW CONCERN?

Scientific literature concludes that fluoropolymers meet internationally recognised Polymer of Low Concern criteria due to their high molecular weight, lack of bioavailability and low mobility. Water Europe specifically refers to PVDF membranes as examples of well-studied fluoropolymers of low concern used in water and wastewater management systems. [\[academic.oup.com\]](https://academic.oup.com), [\[watereurope.eu\]](https://watereurope.eu)

3 ARE PVDF MEMBRANES BEING BANNED IN EUROPE?

No final EU legislation banning PVDF membrane use has been adopted. The regulatory process remains under development and discussions continue regarding essential uses, alternatives, socio-economic impacts and implementation mechanisms. Water-sector organisations continue to advocate for the recognition of critical water-treatment applications. [\[watereurope.eu\]](https://watereurope.eu), [\[aquatechtrade.com\]](https://aquatechtrade.com), [\[ECHA, 2026\]](https://echa.europa.eu).

4 SHOULD WE STOP USING PVDF MEMBRANES?

No, based on currently available information, Blue Foot does not believe there is any justification for discontinuing the specification of PVDF membranes. PVDF remains one of the most widely used membrane materials in drinking water treatment, wastewater treatment and membrane bioreactor (MBR) systems worldwide. [\[pubs.rsc.org\]](https://pubs.rsc.org), [\[thembrsite.com\]](https://thembrsite.com), [\[membraneco...ltancy.com\]](https://membraneco...ltancy.com)

5 DO PVDF MEMBRANES RELEASE PFAS INTO THE TREATED WATER?

Blue Foot's own testing programme has not identified evidence of PFAS release from IPC® membrane products under the tested conditions. Long-term membrane leaching studies and wastewater investigations did not identify detectable PFAS traces in analysed membrane samples and reported PFAS values below analytical reporting limits.

In addition, independent membrane-industry commentary states that significant PFAS shedding from PVDF membranes during actual use has not been demonstrated. [\[thembrsite.com\]](https://thembrsite.com)

6 HAS BLUE FOOT TESTED ITS MANUFACTURING WASTEWATER FOR PFAS?

Yes.

Blue Foot has conducted analysis of 42 PFAS compounds in process water and wastewater as part of its environmental monitoring programme.

7 WHAT WERE THE RESULTS OF BLUE FOOT'S PFAS TESTS?

Blue Foot's testing programme reported the following results:

PFAS values in analysed water samples were reported below the analytical detection limit (typically 0.01 µg/L).

Analysis of membrane samples reported no detectable PFAS traces.

Based on these results, Blue Foot has not identified evidence of PFAS release from manufacturing wastewater streams or IPC® membrane products under the reported test conditions.

8 PVDF MEMBRANES: THE PROBLEM OR THE SOLUTION?

Blue Foot believes they are part of the solution.

Water Europe identifies membrane technologies such as reverse osmosis and nanofiltration among the technologies used for PFAS removal from water. Water Europe also highlights PVDF membranes as examples of fluoropolymers of low concern used in water and wastewater management systems. [\[watereurope.eu\]](https://watereurope.eu)

Membrane systems are often combined with technologies such as powdered activated carbon (PAC), granular activated carbon (GAC) or ion exchange to help utilities manage PFAS contamination.

PVDF membranes are not only the subject of the PFAS discussion; they are also technologies used by the water industry to help manage PFAS contamination and protect public health. [\[watereurope.eu\]](https://watereurope.eu), [\[pubs.rsc.org\]](https://pubs.rsc.org)

9 CAN PVDF MEMBRANES DIRECTLY REMOVE PFAS FROM WATER?

Some membrane processes, particularly nanofiltration (NF) and reverse osmosis (RO), are used for PFAS removal. Water Europe identifies membrane technologies among the treatment methods used where PFAS removal is required. [\[watereurope.eu\]](https://watereurope.eu)

For ultrafiltration (UF) systems, PFAS removal generally relies on complementary technologies such as activated carbon adsorption or ion exchange. In those systems, membranes support overall treatment performance and process reliability but are not necessarily the primary PFAS-removal mechanism. This is an engineering interpretation of the treatment approaches described by Water Europe. [\[watereurope.eu\]](https://watereurope.eu)

10 DOES BLUE FOOT USE PVDF MADE WITH FLUOROSURFACTANTS?

For IPC® membrane production, Blue Foot sources PVDF grades that are manufactured without fluorosurfactants as production agents. Blue Foot's supplier qualification process confirms that the PVDF grades used in IPC® membrane production are produced without PFAS emulsifiers.

The PVDF polymer grade used in IPC® membranes is also certified to NSF/ANSI/CAN 61, a widely recognised health-effects standard for materials used in drinking-water systems.

11 HAVE MAJOR PVDF SUPPLIERS MOVED AWAY FROM FLUOROSURFACTANT-BASED PRODUCTION?

Yes.

Arkema publicly states that it uses non-fluorinated surfactants in PVDF production and offers fluorosurfactant-free PVDF technologies. Syensqo (formerly part of Solvay) has also publicly announced development and implementation of non-fluorosurfactant fluoropolymer production technologies. [\[arkema.com\]](https://arkema.com), [\[kynar500.arkema.com\]](https://kynar500.arkema.com), [\[solvay.com\]](https://solvay.com), [\[syensqo.com\]](https://syensqo.com)

12 WHY IS PVDF PREFERRED OVER ALTERNATIVE MEMBRANE MATERIALS?

PVDF has become a leading membrane material because of its combination of:

- Chemical resistance
- Oxidant tolerance
- Mechanical toughness
- Resistance to aggressive cleaning

- Long service life

Public supplier information highlights superior resistance to chlorine, chloramines, sodium hypochlorite, chlorine dioxide and other oxidants commonly used in water-treatment applications. [\[Améduri, 2025\]](#), [\[Arkema-5\]](#)

13 COULD PES REPLACE PVDF?

In some applications PES may be technically feasible, but replacement should not automatically be assumed to be equivalent.

Industry sources note that substitution is not necessarily a like-for-like replacement and that membrane material selection must consider operational performance, durability, lifecycle cost and reliability. [\[Pearce, 2025\]](#)

14 DOES PES HAVE ANY ENVIRONMENTAL CONCERNS?

Published scientific work reports release of Bisphenol-S (BPS) from degraded PES and PPSU materials under environmental weathering conditions involving UV exposure, elevated temperatures and oxidative degradation. The study does not demonstrate BPS release from water-treatment membranes during normal operation, but it highlights the need to evaluate replacement materials on their complete lifecycle environmental profile. [\[morressier.com\]](#)

15 IS REPLACING PVDF AUTOMATICALLY BETTER FOR THE ENVIRONMENT?

Not necessarily.

A sustainable assessment should consider:

- Manufacturing emissions
- Operational performance
- Service life
- Cleaning requirements
- Material consumption
- Replacement frequency
- End-of-life management
- Potential release of regulated or emerging substances

Replacing a material solely because it contains fluorine may result in unintended environmental consequences if the alternative has a shorter lifetime, requires more frequent replacement or introduces different chemical concerns. [\[morressier.com\]](#), [\[Arkema-5\]](#), [\[Pearce, 2025\]](#)

16 WHAT HAPPENS TO PVDF MEMBRANES AT THE END OF THEIR SERVICE LIFE?

Blue Foot supports controlled end-of-life management of spent PVDF membrane products. Industrial-scale research has demonstrated complete mineralisation of the organic fluorinated content in tested PVDF-containing waste, with destruction and removal efficiencies of 99.9999% or higher under the reported incineration conditions [\[Ramboll, 2026\]](#), [\[Corbin et al, 2026\]](#). This provides evidence that appropriately operated industrial incineration is an effective end-of-life route for PVDF-containing waste.

Although no landfill-specific study has been performed on IPC® membranes, Blue Foot's membrane-leachate testing found no evidence of PFAS release under the reported conditions. The available evidence therefore provides no indication that spent IPC® membranes would become a significant PFAS-leaching source at end-of-life.

17 WHAT IS BLUE FOOT'S OVERALL POSITION?

Blue Foot believes that membrane materials should be evaluated on scientific evidence, actual environmental performance and contribution to water quality.

Based on current information:

- PVDF is fundamentally different from low-molecular-weight PFAS compounds. [\[academic.oup.com\]](#)
- PVDF is recognised as a fluoropolymer of low concern in water-treatment applications. [\[watereurope.eu\]](#)
- Blue Foot's testing has not identified evidence of PFAS release from IPC® membrane manufacturing wastewater or membrane leachate under the tested conditions.
- Membrane technologies are part of the water sector's response to PFAS contamination. [\[watereurope.eu\]](#)
- PVDF remains a proven and widely used membrane material for drinking water, wastewater treatment and water reuse. [\[pubs.rsc.org\]](#), [\[thembrsite.com\]](#), [\[Pearce, 2025\]](#)

BOTTOM LINE

PVDF membranes are not only part of the PFAS discussion; they are also part of the water industry's solution to PFAS contamination.

Blue Foot's testing has not identified evidence of PFAS release from IPC® membrane manufacturing wastewater or membrane leachate under the tested conditions.

For these reasons, Blue Foot continues to regard PVDF membrane technology as a proven, extensively tested and future-ready solution for water and wastewater treatment applications. [\[watereurope.eu\]](#), [\[pubs.rsc.org\]](#), [\[thembrsite.com\]](#)