

Guide

Facing Change:

Emerging PFAS Risks & Parts Obsolescence for Manufacturers

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Introduction

Recently, per- and polyfluoroalkyl substances (PFAS), also known as "forever chemicals," have garnered major attention due to their persistent and bioaccumulative nature. These synthetic fluorocarbons, which include over 16,000 different substances, are used in numerous industries because of their resistance to heat, oil, and water.[1] However, studies have linked exposure from some PFAS to health issues such as increased risks of thyroid disease, elevated cholesterol levels, and reduced fertility.[2]

The rising awareness of these concerns has prompted strong regulatory responses and a growing movement toward limiting PFAS use. This shift is part of a broader trend toward enhancing environmental protections and safeguarding public health, signaling a change in how these chemicals are used in consumer products and manufacturing processes.

1 Kluger, J. (2023, May 19). All The Stuff in Your Home That Might Contain PFAS 'Forever Chemicals'. *Time*. https://time.com/6281242/pfas-forever-chemicals-home-beauty-body-products/

2 Agency for Toxic Substances and Disease Registry. (2024, January 18). What are the health effects of PFAS? https://www.atsdr.cdc.gov/pfas/health-effects/index.html

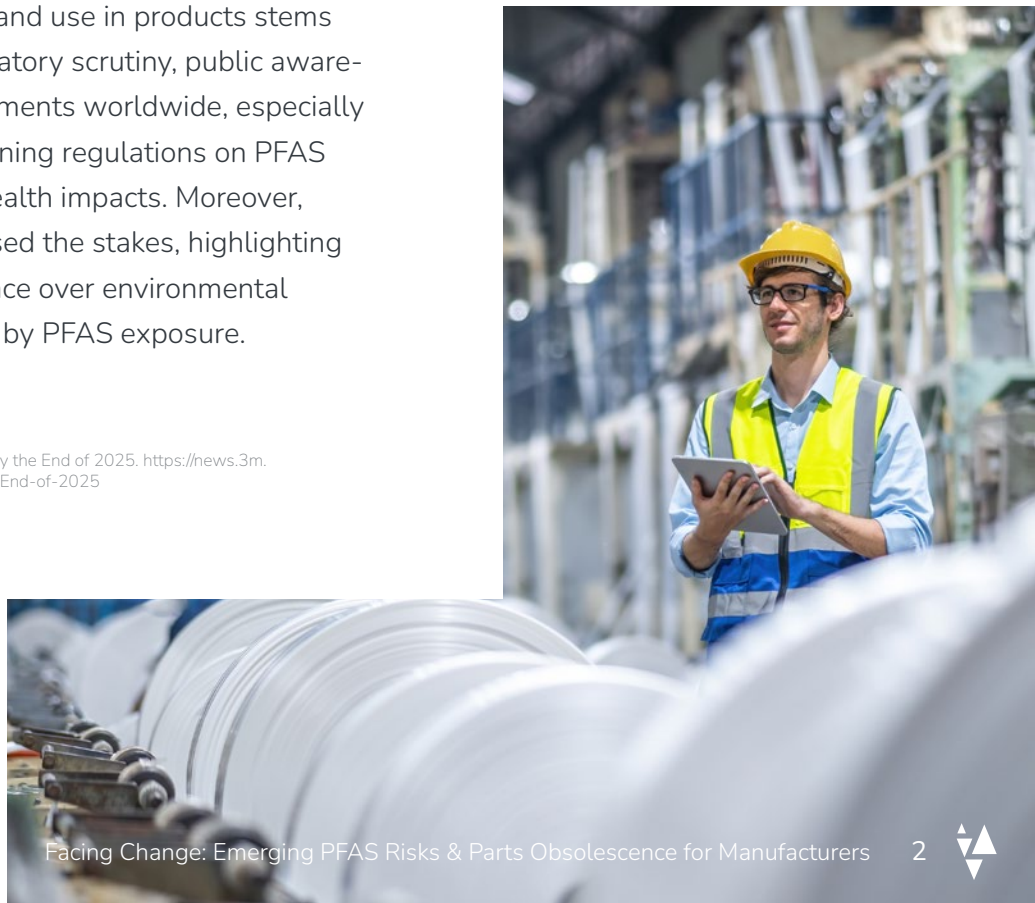
3M's PFAS Exit:

A Seismic Shift for Global Manufacturing

In December 2022, 3M announced that it would end production of PFAS by 2025.[3] This decision has big implications for the manufacturing landscape, as 3M is a leading supplier with a product range spanning over 25,000 items used in the automotive, construction, electronics, healthcare, and other industries.[4] The entire supply chain, from multinational corporations to small manufacturers, faces a significant upheaval.

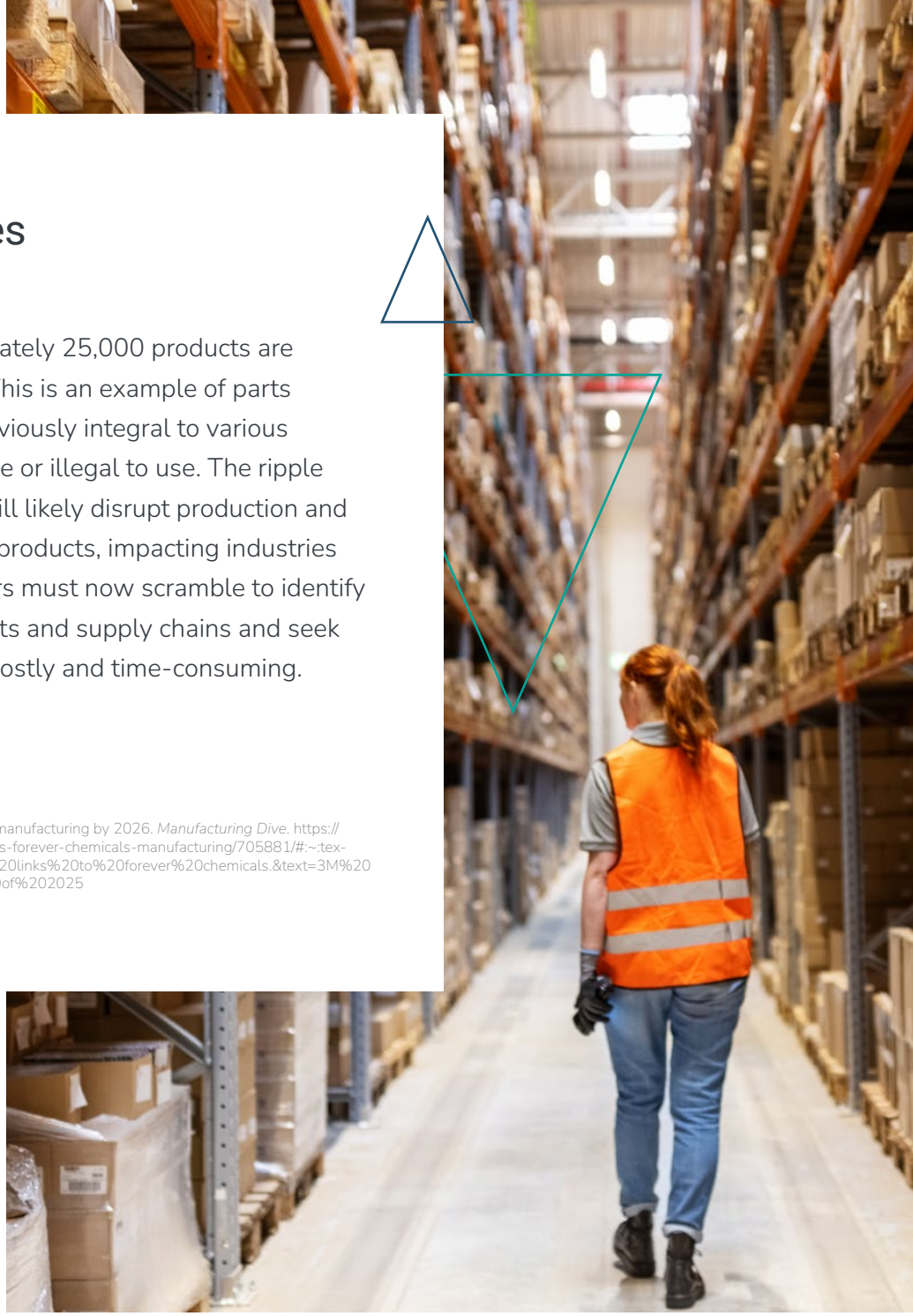
Catalysts for Change

The decision to end PFAS production and use in products stems from a combination of increased regulatory scrutiny, public awareness, and escalating lawsuits. Governments worldwide, especially in the EU, U.S., and Canada, are tightening regulations on PFAS to mitigate their environmental and health impacts. Moreover, high-profile legal challenges have raised the stakes, highlighting the substantial liabilities companies face over environmental pollution and health damages caused by PFAS exposure.



3 3M. (2022, December 20). 3M to Exit PFAS Manufacturing by the End of 2025. https://news.3m.com/2022-12-20-3M-to-Exit-PFAS-Manufacturing-by-the-End-of-2025

4 3M. (n.d.). PFAS & Their Uses. https://pfas.3m.com/pfas_uses



Impact on Product Lines & Supply Chains

With 3M phasing out PFAS, approximately 25,000 products are being reformulated or discontinued.[5] This is an example of parts obsolescence, where components previously integral to various products suddenly become unavailable or illegal to use. The ripple effect through global supply chains will likely disrupt production and necessitate the redesign of countless products, impacting industries and markets worldwide. Manufacturers must now scramble to identify PFAS components within their products and supply chains and seek alternatives — a process that can be costly and time-consuming.

5 Samora, S. (2024, January 30). 3M on track to sunset PFAS manufacturing by 2026. *Manufacturing Dive*. https://www.manufacturingdive.com/news/3m-on-track-to-exit-pfas-forever-chemicals-manufacturing/705881/#:~:text=The%20company%20has%20reformulated%20or,with%20links%20to%20forever%20chemicals.&text=3M%20headquarters%20in%20Minnesota.,by%20the%20end%20of%202025

Challenges for Manufacturers

The decision to phase out PFAS affects everything from product design to equipment maintenance. PFAS compounds are entrenched in numerous manufacturing processes, and their elimination will require businesses to adapt.



Scrambling for PFAS-Free Alternatives

As manufacturers globally move away from PFAS, the demand for PFAS-free parts will surge, leading to stiff competition among companies to secure these new components. Initially, the market may struggle to meet this demand, potentially resulting in supply chain disruptions and price hikes. This shortage will not only affect production schedules but also lead to increased costs as manufacturers vie for the limited available alternatives.



Redesign & Recertification Challenges

The absence of components containing PFAS will require substantial product redesigns. Redesigning products to comply with new regulations and accommodate different materials is both time-consuming and costly. Both performance and quality may be impacted by the loss of PFAS-derived properties in product designs. Moreover, each redesigned product may need to undergo requalification and recertification, further extending time to market and adding to costs. Such processes ensure that products meet safety and regulatory standards, but they also delay product availability and impact manufacturers' ability to compete.

Equipment & Operational Disruptions

The phase-out impacts not only product lines but also the operational equipment used in manufacturing. Components like gaskets or seals, which may contain PFAS, are crucial for machinery operation and maintenance. PFAS chemicals may be used in processing operations. Finding suitable replacements may be difficult, potentially leading to last-time buys or the need for significant capital investment in new equipment. This change could disrupt ongoing operations and divert resources from other strategic areas.

Strategic & Financial Implications

The transition away from PFAS is about more than just operational adjustments. It also requires a strategic shift in which manufacturers must rethink their approach to product development, supply chain management, and capital investment. There are big financial implications here, encompassing the direct costs of redesign and recertification, as well as the indirect costs around supply chain disruptions and increased competition for alternative materials.



Other Risks Associated With PFAS Use

While parts obsolescence is a serious risk to manufacturers, it is not the only one PFAS is creating. We'll cover some of these below.

EU Regulatory Requirements

The EU's regulatory landscape for PFAS is complex and stringent, and aims to protect human health and the environment. Some key regulations include the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation and the Persistent Organic Pollutants (POPs) Regulation.



REACH Regulation

The REACH Regulation is a central instrument for controlling PFAS use within the EU. It imposes specific rules on companies dealing with substances of very high concern (SVHCs) on the REACH Candidates for Authorisation List, which include many PFAS compounds. For example, HFPO-DA (GenX) and its derivatives are listed on the REACH Candidate List, necessitating strict management to minimize environmental release and human exposure.

Under REACH Annex XVII, the Restricted Substances List includes limitations on certain PFAS such as perfluorocarboxylic acids (C9-14 PFCA). But REACH restrictions on the use of PFAS continue to expand. Most significantly, a proposal to ban the use of 10,000+ PFAS in the EU is undergoing review for future restrictions. Additionally, recent proposals aim to restrict PFAS in firefighting foams, with substantial backing from the European Chemicals Agency (ECHA)'s scientific committees. PFAS identified as SVHCs may eventually be moved to the REACH Authorisation List, requiring companies to obtain prior approval from ECHA before use.

A Blanket Ban on PFAS

A potential blanket ban on PFAS is also under discussion within the EU. This could lead to even more restrictions than are currently in place. If accepted, the proposal would radically alter the regulatory landscape, making compliance an even greater challenge for industries reliant on these chemicals.



Stockholm Convention on POPs

Persistent organic pollutants (POPs) are stable organic compounds that resist biodegradation and pose long-term risks to human health and ecosystems. The Stockholm Convention on POPs, effective since 2004, seeks to restrict or eliminate POPs. In the EU, this international standard is implemented by the POPs Regulation.

This regulation includes several PFAS chemicals such as PFOS, PFOA, and PFHxS, which are subject to stringent controls. Manufacturers must comply with the Stockholm Convention and EU POPs Regulation by:

- Understanding legislation in all markets where their products are sold
- Surveying supply chains for PFAS presence
- Evaluating and implementing PFAS alternatives
- Redesigning materials to eliminate PFAS
- Tracking updates to the POPs lists to ensure ongoing compliance

U.S. Regulatory Requirements

The Toxic Substances Control Act

On October 11, 2023, the U.S. Environmental Protection Agency (EPA) published their final rule for reporting PFAS under the Toxic Substances Control Act (TSCA). This rule affects businesses that have manufactured or imported PFAS between 2011 and 2022 , including those that import articles with PFAS in them, like surface coatings or electrical equipment. There are no exceptions for small businesses or small-volume importers, although there are simplified requirements for those importing PFAS in articles or making less than 10 kilograms for research purposes.

Businesses must provide detailed information, including company and plant-site details, specific chemical data, and how the PFAS are used. Reports must cover data from 2011 to 2022 and be submitted through the EPA's Central Data Exchange (CDX) system. The submission portal opens on July 11, 2025, with a deadline of January 11, 2026. Small businesses get an extra six months — their deadline is July 11, 2026.



State-Level Restrictions

In addition to federal regulations under TSCA, many U.S. states have their own rules for businesses operating or selling products within their borders. The state-level PFAS regulatory landscape is complex; nearly all states already have some PFAS-related regulations in place, and many additional (and increasingly restrictive) proposals are soon expected to become law. These state regulations often involve reporting, paying fees, notifying customers, or outright banning certain products containing PFAS (or increasingly, ALL products with PFAS), with significant variations from state to state.







For example, Minnesota requires reporting for products with intentionally added PFAS by 2026. It has placed restrictions on a wide range of items, including carpets, cleaning products, and cosmetics; these take effect in 2025. By 2032, all products containing PFAS will be banned except in cases where the state determines that its use is essential. Each state's approach is different but many states are following Minnesota's lead, so businesses must check with their legal counsel and state environmental departments for specific guidance.

Consumer Awareness & Expectations

Consumers increasingly want PFAS-free products. This sentiment has pushed retailers like REI to commit to phasing out these chemicals from items like cookware by fall 2024 and all textiles by fall 2026.[6] And it's not just the general public that wants to avoid PFAS — business-to-business (B2B) customers also don't want the headache of dealing with the associated risks.[7]





NGO Advocacy Against PFAS

Non-governmental organizations (NGOs) are demanding more transparency and stricter controls on PFAS. Groups like Toxic-Free Future are not only advocating for the removal of PFAS from products but also pushing for safer alternatives.[8] Their active campaigns are powerful influencers on both public opinion and industry standards, holding major retailers and manufacturers accountable for safer and more sustainable practices.

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6 REI. (2023, February 21). *REI Co-op Raises Bar for Companies Operating in Outdoor Industry: Releases New Product Standards for its 1,000+ Brand Partners to Advance Social and Environmental Practices*. https://www.rei.com/newsroom/article/rei-co-op-raises-bar-for-companies-operating-in-outdoor-industry

7 Schade, M. (2021, May 25). More retailers are saying no to 'forever chemicals.' *GreenBiz*. https://www.greenbiz.com/article/more-retailers-are-saying-no-forever-chemicals

8 Snider, M. (2023, February 23). REI announces plan to remove 'forever chemicals' from its products by 2026. *USA Today*. https://www.usatoday.com/story/money/shopping/2023/02/22/rei-stores-forever-chemicals-products/11321761002/?eType=EmailBlastContent&eId=2b7aba2e-fda8-4ac4-99be-d601ea5fd207

Insurer Influence on PFAS Usage

Insurers are tightening their policies on PFAS to manage the growing risks of environmental lawsuits and regulatory fines. Companies making "all-natural" or "sustainable" claims while using PFAS are facing increasing legal challenges, prompting insurers to take a closer look at these risks. For example, insurers like Zurich North America assess their clients' PFAS exposure during the underwriting process.[9] Others, such as Grange Mutual Casualty Company, have adopted exclusions like the Total Pollution Exclusion (TPE) to avoid coverage for PFAS-related lawsuits, reflecting a shift towards more cautious risk management.[10]



Investor Pressures for PFAS Phase-Out

Motivated by financial and regulatory concerns, investors managing trillions in assets are pressing companies to phase out PFAS. This investor activism aims to pre-empt regulatory changes and mitigate risks, as ongoing PFAS use can lead to significant legal and operational costs. The push from major asset managers is a clear signal to companies: Eliminate PFAS to protect both public health and shareholder value. Recent lawsuits against companies like Bolthouse Farms for PFAS in "natural" products illustrate the financial and reputational stakes involved.[11]

9 Zurich Insurance. (2022, November 14). PFAS – the emerging risk of 'Forever Chemicals'. https://www.zurich.com/-/media/project/zurich/dotcom/products-and-services/docs/pfas-risk-insight-the-emerging-risks-of-the-forever-chemical.pdf?rev=eec3fd184d924c3fb176e9bd302b01ba

10 Plunkett Cooney. (2022, December 15). Pollution Exclusion, Intervention Coverage Update. https://www.plunkettcooney.com/publications-Pollution-Exclusion-Intervention-Coverage-Update

11 Perkins, T. (2023, February 14). Top US smoothie company accused of deception after toxic PFAS discovered. *The Guardian*. https://www.theguardian.com/environment/2023/feb/14/green-goddess-smoothie-maker-bolthouse-farms-toxix-pfas-chemicals

Don’t Wait: Safeguard Your Bottom Line With Proactive Compliance

As scrutiny over the use of PFAS grows, manufacturers must understand where these chemicals are used in your products and supply chain. This information is essential not just for meeting your regulatory requirements but also for managing the risks of parts obsolescence, which can disrupt your manufacturing process and product availability.

Not Sure Where to Start?

Assent is here to guide you. We'll help you identify PFAS in your supply chain, prepare for parts obsolescence, and ensure compliance with evolving requirements. Our services streamline your reporting processes and provide robust data management, so you can adapt quickly to market changes, stay competitive, and prioritize environmental responsibility.

To see Assent’s solution in action, **book a demo** with us today.

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