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Chemicals that won't fade away, PFAS are a decades-old problem that will challenge insurers and risk managers for years.

PFAS – the emerging risk of 'Forever Chemicals'

Used for around 80 years in a range of commercial and personal products from firefighting foam to cosmetics, PFAS were supposed to make life easier. Instead, they have created serious health concerns and sparked litigation over a persistent and worrisome risk.

The substances – per- and polyfluoroalkyl substances, commonly called PFAS – are often referred to as 'forever chemicals' because their strong bonds of fluorine and carbon make them resilient to disintegration in the environment and in the bodies of people exposed to them. By many accounts, most humans are said to have measurable levels of PFAS in their bloodstream. A Health Canada study found that 98.5 percent of Canadians have some form of the chemicals in their body.[1] PFAS also linger in soil and have contaminated waterways near plants where they were used in manufacturing. When they become airborne, the chemicals can spread great distances beyond their release. They have been found in plants and animals used for food.

"While PFAS have been used since the 1940s, they are still considered an emerging risk as the exposure continues to be defined," said Scott Toland, Zurich Commercial Insurance's Global Head of Liability. **"It is a prevalent and serious risk."**

The risk is pervasive because PFAS are nearly impossible to avoid. A class of over 5,000 chemicals, they have been detected in household products such as stain- and water-repellent fabrics, non-stick cooking utensils, paint, waxes, polishes, fast-food wrappers, cosmetics and shampoo. While production of the most worrisome PFAS compounds have been largely phased out in North America and Europe, it has increased in Russia, India and China.

Studies have found links between PFAS exposure and various cancers, effects on the immune system, lower birth rates, thyroid problems and reduced effectiveness of vaccines.

The health concerns, litigation around employers' responsibility for eradicating PFAS and public debate on the dangers of the chemicals have created a complex challenge for insurers and risk managers. As they work to ensure the public is protected from exposure to PFAS, they look to regulators to help with solutions to what has become a global threat to public health.

Given the ubiquitous presence of PFAS and the increasing litigation against those who have manufactured or used them in processes, it is not surprising that PFAS are sometimes referred to as the 'new asbestos.'

[1] Health Canada. 'Fifth Report on Human Biomonitoring of Environmental Chemicals in Canada.' Health Canada. November 2019.

As the science around PFAS has increasingly linked the chemicals to health concerns, litigation has mushroomed.

PFAS, whether they are contained in products or used in manufacturing and industrial processes, create ecological exposures when they end up in water, soil or are carried through the air. That leaves people and property exposed not only to the products containing the chemicals, but to a contaminated environment as well.

Lawsuits began appearing in the early 2000s when there was little scientific information to back up claims that PFAS caused harm. That has changed, and with more evidence available to support arguments that the chemicals were linked to health issues such as low birth weight, thyroid problems and increases in cholesterol, litigation was not far behind.[2]

PFAS litigation began in earnest in 2009 when water utilities in Ohio and Florida filed lawsuits against manufacturers to recover the cost of removing the chemicals from their water. Since then, suits have expanded to class actions related to drinking water contamination and bodily injury, such as that claimed by firefighters exposed to PFAS in foam used to extinguish fires.

More than 6,400 PFAS-related lawsuits have been filed since 2005. That number is expected to grow and the scope of lawsuits is predicted to broaden.[2]

"Plaintiffs' lawyers are aggressively looking to identify new categories of defendants and claims," said Sabine Schweich, Zurich's AVP, Latent & Environmental Claims. **"They are likely to pursue new companies producing products that haven't previously been a part of PFAS litigation."**

"The pervasiveness of the issue and its potential for class-action litigation have led some industry experts to compare it to the asbestos liability crisis," said Schweich. While PFAS manufacturers, retailers, distributors are among obvious targets of litigation, we will likely see additional companies in the product supply chain as well as different industries including non-PFAS industries, caught up in lawsuits, she added.

"The pervasiveness of the issue and its potential for class-action litigation have led some industry experts to compare it to the asbestos liability crisis"

[2] Bloomberg Law. 'Companies Face Billions in Damages as PFAS Lawsuits Flood Courts.' May, 2022.

Regulation aims to ease PFAS dangers

Regulators are reacting to the heightened attention to PFAS with moves to blunt the dangers to people and the environment. The U.S. Environmental Protection Agency (EPA) in 2021 introduced its 'PFAS Strategic Roadmap: EPA's Commitment to Action 2021-2024.'[3] The plan outlines actions including steps to restrict PFAS, hold polluters accountable and address the impact of the chemicals on disadvantaged communities, among other actions.

"The EPA and the FDA (U.S. Food and Drug Administration) are starting to move forward with regulations they think might be reasonable to contain this," said Chris Garrabrant, Senior Principal Engineer with Zurich North America, during a recent 'Future of Risk' podcast. **"Businesses that are not already preparing to meet these major new compliance obligations need to start understanding what they need to do now,"** he said.

Businesses will be required to disclose the presence of PFAS materials and products that may contain them, Garrabrant said. **"This reporting obligation extends back 10 years,"** he pointed out.

The EPA in April announced measures it is taking to help keep PFAS out of water.[4] The agency published a new method that screens for the presence of the chemicals that it says will be particularly useful in understanding the forms of PFAS in wastewater. In addition, it has issued instructions for monitoring the chemicals in surface water and detailed best practices for addressing discharges. Also in the works are water quality criteria to protect aquatic life from PFAS.

"Regulation is ramping up outside the U.S. as well," said Jelena Buha, Global Risk Engineering Practice Leader at Zurich Resilience Solutions. Perfluorooctanoic sulfonic acid (PFOS) has been restricted in the EU for more than 10 years under the EU's Persistent Organic Pollutants (POPs) Regulation.

In addition, perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds have been banned since July 2020. The European Chemicals Agency (ECHA) in January 2022 submitted a restriction proposal for PFAS used in firefighting foams.[5]

"Future restrictions in the EU/EEA are foreseen in 2023 for C8 PFAS not already restricted, and perfluorinated carboxylic acids (C9-14 PFCAs), their salts and precursors will be restricted. By 2027 all PFAS are expected to be banned, including PTFE also known as Teflon, with certain exemptions and respective thresholds," said Jelena Buha. The European Commission includes PFAS on a rolling list of chemicals in its 'Restrictions Roadmap' that identifies toxic substances to be considered for restriction by the ECHA. The list will be reviewed and updated before a significant revision of the EU's REACH regulation in 2027. [6]

[3] U.S. Environmental Protection Agency. 'PFAS Strategic Roadmap: EPA's Commitment to Action 2021-2024.' October 2021.

[4] U.S. Environmental Protection Agency. 'EPA Delivers on Three Water Commitments in the Agency's PFAS Strategic Roadmap.' April 2022.

[5] European Chemical Agency: Perfluoroalkyl chemicals (PFAS) 'https://echa.europa.eu/hot-topics/perfluoroalkyl-chemicals-pfas'

[6] European Commission. 'Restrictions Roadmap under the Chemicals Strategy for Sustainability.' April 2022

Is the risk manageable? Such a pervasive exposure requires a thoughtful approach to risk identification and mitigation.

Manufacturers, retailers and distributors of PFAS and PFAS-containing products are managing a risk that creates potential liability in a number of areas, including product liability, environmental damage and harm to workers who are exposed to the chemicals in their jobs. There also is the potential for directors' and officers' claims that could include allegations of undisclosed PFAS liabilities.

Because PFAS don't disintegrate, disposing of them is a daunting risk management challenge.

Fred Myatt, Technical Underwriter at Zurich North America, said during the 'Future of Risk' podcast that he was reminded that **"every molecule of PFAS that's ever been created still exists. That fluorine-carbon bond is shockingly strong."**

The EPA favors an approach to controlling and cleaning up PFAS that is based on research, restrictions and remediation, according to Garrabrant. **"Keeping it science-based is where we will see the best approach to dealing with PFAS,"** he said.

Restricting PFAS means taking a comprehensive approach to preventing them from ever entering the air, water and soil, Garrabrant said. **"Looking at it from an engineering standpoint, if you keep the contaminant out, it doesn't get to the point where it affects human health and the environment."**

Myatt pointed out that Zurich likes to hear from customers on how they are managing their risks and **"this is one more risk we want them to start identifying, managing and assessing,"** if they haven't already done so.

EPA rules are going to evolve and change, Myatt said. **"If I'm a business, I want to manage it even before the rules come into play, so that I know what my exposure is and what I'm doing to eliminate that from my processes if that's possible."**

Is the risk manageable? Such a pervasive exposure requires a thoughtful approach to risk identification and mitigation.

There are not a lot of choices when it comes to remediation of PFAS, experts agree. Myatt lists two approaches.

"One would be reverse osmosis," he said, which simply put, means capturing the contaminants in a small filter. The other is using activated charcoal to filter out PFAS. But while the contaminants can be filtered, they still need to be disposed of, he added. **"You've not destroyed it, you've collected it."**

If the collected contaminants are incinerated, they may recombine once they cool, Myatt said. And if they are disposed of in a landfill, there is the risk of spread that could lead to pollution.

"There aren't any good answers at the moment," Myatt said. **"That's something that still needs study."**

Zurich advises customers with potential PFAS exposure to first conduct a risk assessment, said Garrabrant. **"What we are advising is that people take stock of their exposures,"** he explained. **"If you determine that an exposure exists, you need to create a risk management plan to monitor, identify and reduce the potential for that… Engineer it out of your processes."**

Early on, companies need to determine whether they have exposures related to their premises, workers or customers, and identify which materials containing PFAS they have used and the manufacturing processes they were used in, Myatt agreed.

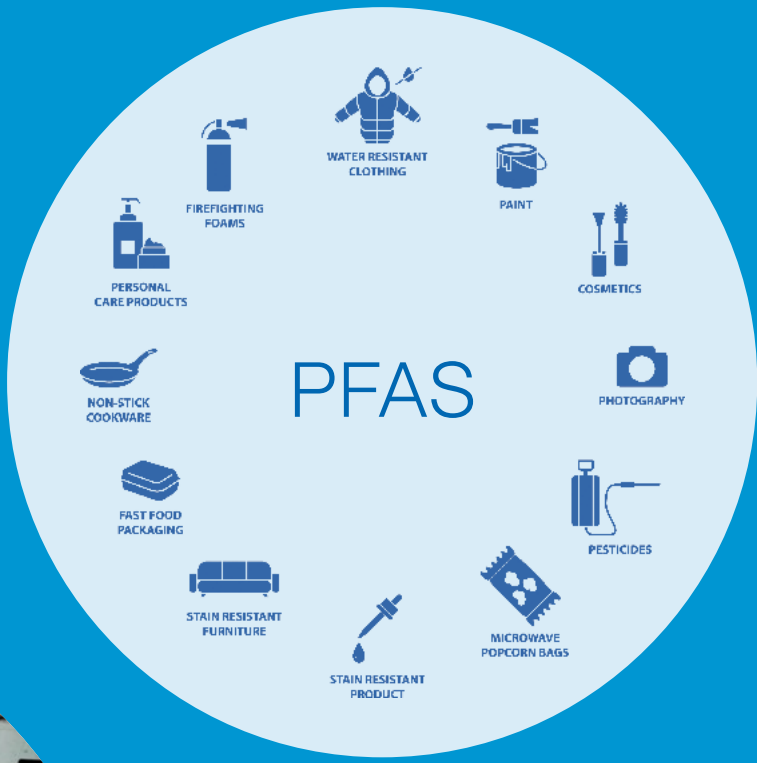
"There are a lot of things that go into this and that companies need to start thinking about, starting with that assessment," Myatt said.

Zurich is training risk engineers to assess customers' risk of PFAS and has developed guidelines on what businesses that are handling, using or manufacturing PFAS should consider in managing the exposure. Underwriters are using a PFAS risk grading framework to guide them in assessing the risk and Zurich is modeling the exposure using data from internal models and external providers.

In conclusion

Identifying, assessing and mitigating PFAS risk will be a feature of the liability landscape for many years to come. Litigation is not expected to slow, and, in fact, observers say class-actions are likely to become a popular approach for plaintiffs' attorneys. How risk managers and their organizations respond to the enormous PFAS exposure could determine the future course of their operations. Experts urge them to begin assessing and mitigating the risk now, if they haven't already started. Zurich is dialoguing with stakeholders and equipping risk engineers to thoroughly identify and manage the risk.

Experts remind us that while protecting companies from PFAS exposure is important, preventing these chemicals from harming people is the most vital part of the work to eliminate them. The impact on the environment is significant as well, and Zurich and other stakeholders have a responsibility to create awareness around the issue as a public service imperative. Providing the right insurance and risk management solutions will go a long way in keeping customers and the public safe.



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