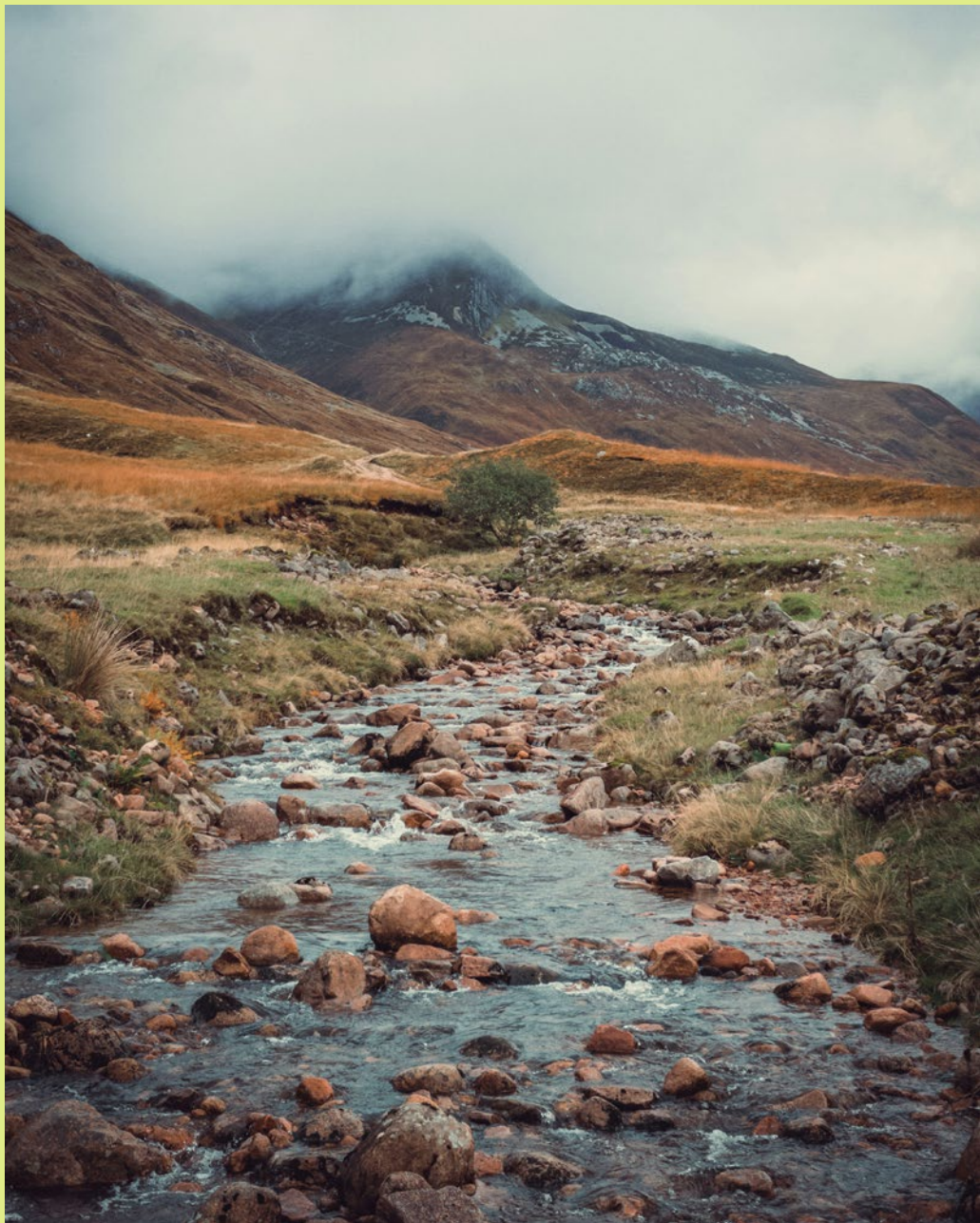


Howden Re

Casualty in focus

PFAS and (re)insurance

A spotlight on Europe



September 2025

HOWDEN

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been used in industry and consumer products worldwide since the 1940s and 1950s. Known for their resistance to heat, water and grease, PFAS are commonly found in everyday items including cookware, water-repellent clothing, stain-resistant fabrics and firefighting foams.

The chemical breakdown of PFAS:



Per- and polyfluoroalkyl substances (PFAS) are a large class of thousands of synthetic chemicals that are used throughout society. However, they are increasingly being detected as environmental pollutants and some have been linked to negative effects on human health.



They all contain carbon-fluorine bonds, which are one of the strongest chemical bonds in organic chemistry. This means that they resist degradation both during use and in the environment. Most PFAS are also easily transported in the environment travelling long distances from their original source.



PFAS have been frequently observed to contaminate groundwater, surface water and soil. Cleaning up polluted sites is technically challenging and costly. If releases continue, they will continue to accumulate in the environment, drinking water and food.

Source: ECHA: Per- and polyfluoroalkyl substances (PFAS), July 10th, 2025

The chemical stability that makes PFAS useful in manufacturing also makes them persistent in the environment and the human body. These substances do not break down easily and can remain in the environment for extended periods — with some studies suggesting they may persist in soil for thousands of years — leading to their ominous nickname: ‘forever chemicals’.

In addition to their persistence, PFAS have a tendency to accumulate in the environment — and in the human body — creating the possibility of new chemical compounds being formed.

The scale of their long-term impact remains unclear, but their widespread use and persistence have raised significant environmental and health concerns. Liabilities arising from PFAS range from land clean-up to bodily injury,

and medical and technological solutions to remove traces of PFAS – and treat potential conditions – are yet to be determined.

Why, then, are PFAS an issue for liability (re)insurers? Similar to asbestos, PFAS represent a risk to the industry because of their potentially systemic nature and capacity to create unpredictable losses. Legal liability could trigger (re)insurance policies for a wide spectrum of clients, classes of business and contracts, due to the potentially prolonged nature of PFAS exposure which could span over multiple years. Finally, given technological uncertainties, the extent of exposure and the clean-up and remediation, costs cannot yet be quantified.

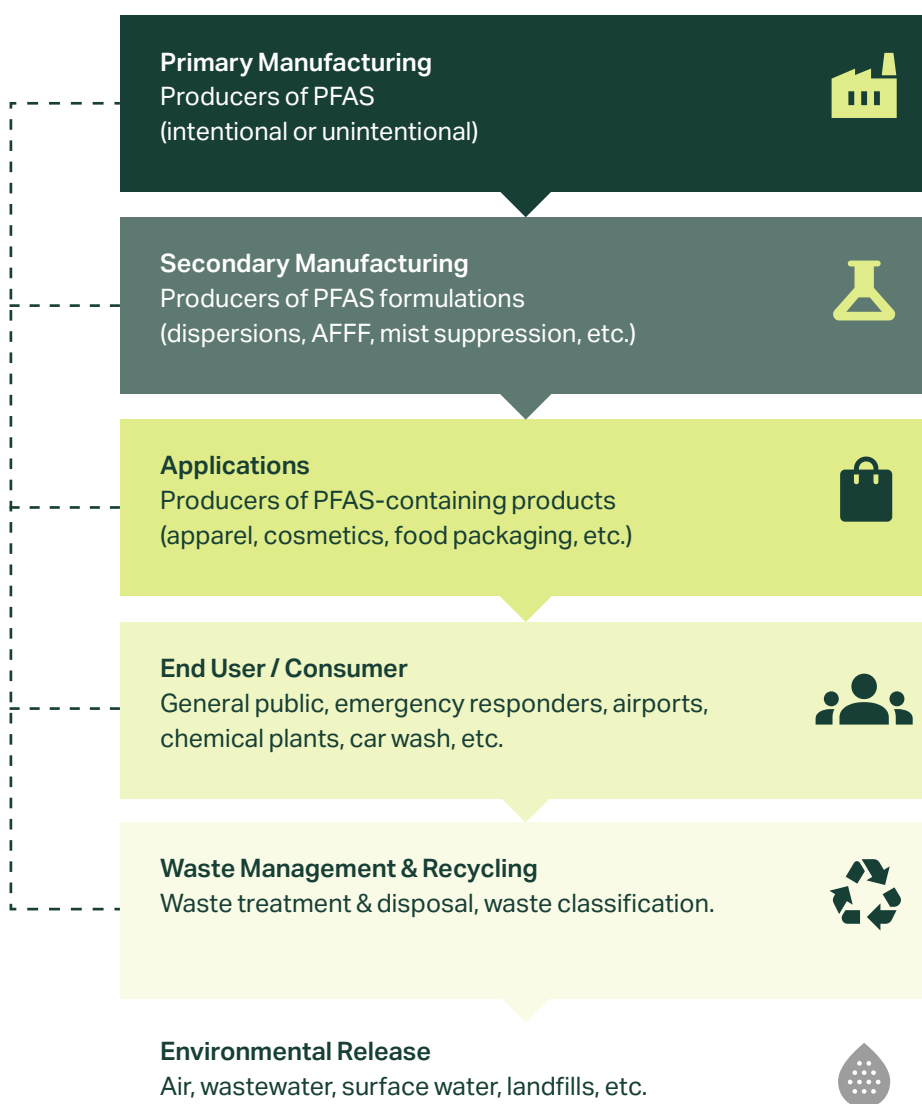
Source: Russell MH, Berti WR, Szostek B, Buck RC. Investigation of the biodegradation potential of a fluoroacrylate polymer product in aerobic soils. Environ Sci Technol. 2008 Feb 1;42(3):800-7. doi: 10.1021/es0710499. PMID: 18323105.

How do PFAS enter the environment and the human body?

PFAS enter the environment at various stages of the production chain and especially in waste management practices. These chemicals can seep into soil, water and air, leading to widespread contamination. Drinking water was previously considered the primary channel to human body.' Science has since proven that PFAS can also be absorbed through the skin'.

PFAS Sources & Release


source: Verisk Emerging Risk PFAS Webinar, National Institute of Environmental Health Science, AM Best




Source: Ragnarsdóttir O, Abdallah MA, Harrad S. Dermal uptake : An important pathway of human exposure to perfluoroalkyl substances? Environ Pollut. 2022 August 15;307:119478. doi: 10.1016/j.envpol.2022.119478. Epub 2022 May 16. PMID: 35588958.

Source: Forever chemicals: the persistent effects of perfluoroalkyl and polyfluoroalkyl substances on human health, eBioMedicine, Volume 95, 2023, 104806, ISSN 2352-3964, <https://doi.org/10.1016/j.ebiom.2023.104806>. (<https://www.sciencedirect.com/science/article/pii/S2352396423003729> and Obsekov, V., Kahn, L.G. & Trasande, L. Leveraging Systematic Reviews to Explore Disease Burden and Costs of Per- and Polyfluoroalkyl Substance Exposures in the United States. Expo Health 15, 373–394 (2023). <https://doi.org/10.1007/s12403-022-00496-y>


Human exposure to PFAS occurs through:




Contaminated drinking water



Food



Consumer products



Occupational settings

Studies have associated PFAS exposure to adverse health effects such as:

Liver damage

Thyroid disease

Decreased fertility

Increased risk of certain cancers

[The Lancet](#)
[Science Direct](#)

The causal link between PFAS and health conditions is debated. Further research will help in producing more data, but researchers are yet to establish a definitive causality with health conditions.

Efforts to eliminate PFAS from products and the environment are complicated by their chemical resilience. In some cases, attempts to destroy PFAS can inadvertently release more harmful by-products.



Known Contamination in Europe and the USA

In early 2023, the Forever Polution Project showed that nearly 23,000 sites all over Europe are contaminated by the “forever chemicals” PFAS.



Both Europe and the United States have documented widespread PFAS contamination. Exposure maps reveal thousands of contaminated sites, particularly near:

- Industrial facilities
- Military bases
- Airports (due to the use of firefighting foam)

Zoom-in on the Nordics:

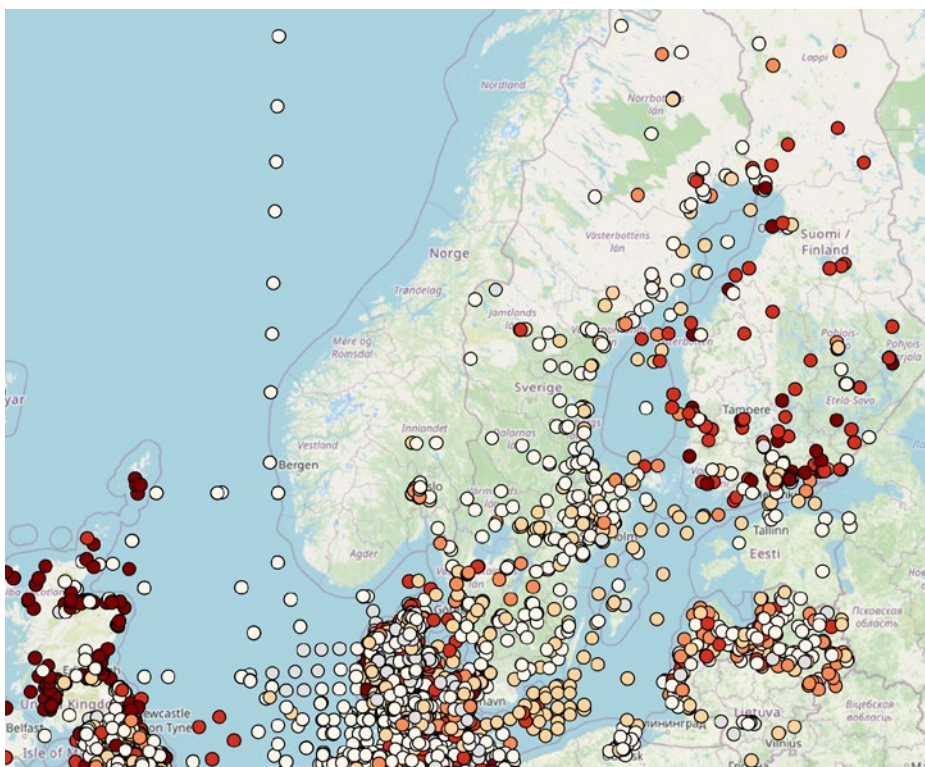
PFAS contamination identified by the Forever Polution Project

Key

Concentrations in Part per Trillions ng/L for liquids - ng/kg for solids

Not detected (<LOQ)	White circle
<10 ppt	Light yellow circle
10 - 100 ppt	Yellow circle
100 - 1,000 ppt	Orange circle
1,000 - 10,000 ppt	Red circle
> 10,000 ppt	Dark red circle

Source:
<https://pdh.cnrs.fr/en/map/>



In the United States, the Environmental Protection Agency (EPA) has identified PFAS in drinking water systems.

Similarly, European agencies have mapped contamination hotspots across the continent, estimating the cleanup cost over two decades could reach up to EUR 95 billion for health-related costs and, in addition, up to EUR 170 billion for non-health related costs. These scenarios assume clean-up is focused on a more limited spectrum of substances and PFAS emissions.

August 2025: The Environmental Protection Agency - quarterly public water system testing data (map produced by EWG)

Key

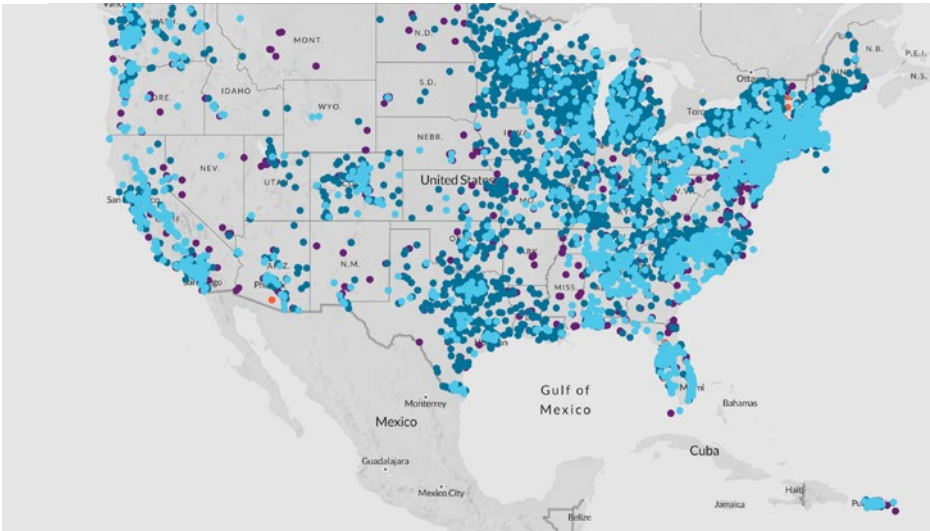
Drinking Water
above proposed limit

Drinking Water
Below proposed limit

Military sites

Other known sites

Source:
EWG



PFAS have been released into the environment — and subsequently to humans — for decades. Increasing awareness of this is resulting in further regulatory scrutiny, and authorities are assessing and measuring contamination with broader scope and more advanced methods. This, combined with heightened public attention, is leading to increased litigation. Claims are surfacing particularly from sites with historical PFAS use, such as airfields and landfills.

Globally regulated PFAS



Since 2009, perfluorooctane sulfonic acid and its derivatives (PFOS) have been included in the international Stockholm Convention to eliminate their use. PFOS has been restricted in the EU for over ten years, under the EU's Persistent Organic Pollutants (POPs) Regulation.



The Stockholm Convention also regulates the global elimination of perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds. PFOA has been banned under the POPs Regulation since 4 July 2020.



In June 2022, the Stockholm Convention parties decided to include PFHxS, its salts and related compounds in the treaty. The Commission added this substance group to the EU's POPs Regulation in May 2023 and the regulation [entered into force](#) on 28 August 2023.

(Source: ECHA: Per- and polyfluoroalkyl substances (PFAS), July 10th, 2025)

When it comes to PFAS litigation, the determination of liability is complicated by:

- Validating the causal link between the PFAS emission and damage.
- Identifying the liable party.
- Determining and quantifying the damage.
- PFAS litigation rose in recent years, with numerous high-profile cases in the United States and Europe. Plaintiffs have sued manufacturers, leading to settlements — mainly for environmental damage and health impacts. Landmark settlements include those involving DuPont and 3M. A number of settlements have resulted in companies agreeing to pay substantial damages and triggered changes in the use of PFAS in business practices.

Previous settlements may be influential for future litigation and also influence insurer liability assessments.

Litigation standards vary between the United States and European Union:

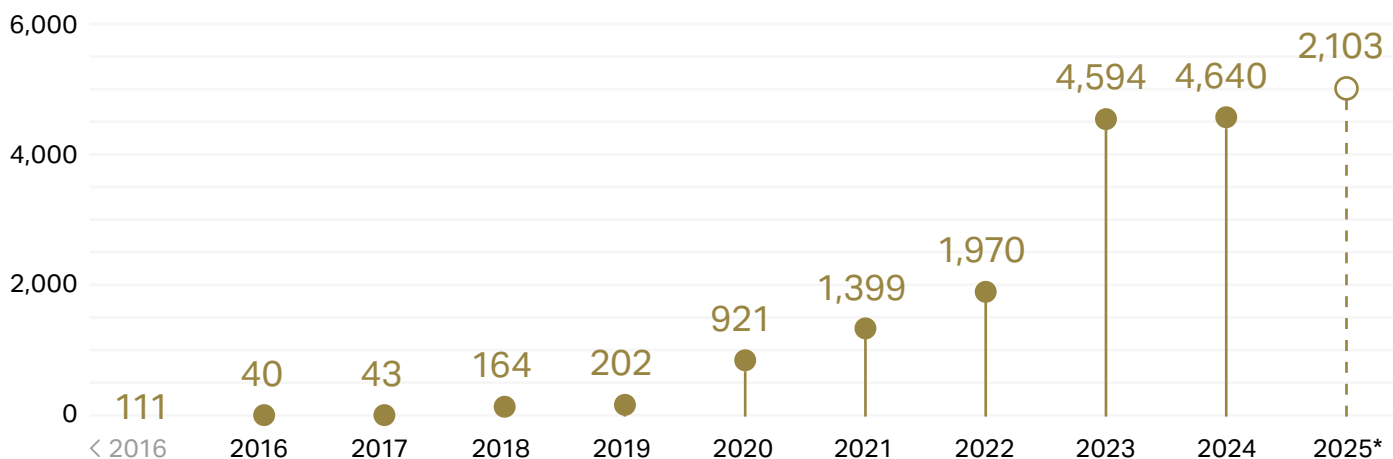
- US class action mechanisms and punitive damages often result in higher settlements.
- European litigation tends to be more conservative, although regulations are evolving, for example:
 - In 2025, an Italian court ruled on the link between PFAS and a work-related death.
 - The Swedish Supreme Court has concluded that numerous inhabitants of Rönneby have indeed suffered bodily injury due to PFAS contamination of drinking water, leading to increased PFAS levels in their blood.

2025 litigation developments

Litigation trends continue to evolve. In the United States, public federal court filings related to PFAS have increased over the years. The EU litigation environment might follow this trend.

Case filings

*2025 numbers are year-to-date. Open dots are full-year estimates



Total ●

Source: <https://law.lexmachina.com/> & STEPTOE, June 2025



Organisations like ChemSec and Verisk/Arium provide overviews and insights into emerging risks and legal precedents. For example ChemSec's "SinList" details hazardous chemicals that can be found in a wide variety of articles, products and manufacturing processes around the globe. The Google litigation database also tracks ongoing cases and regulatory actions.

Recent developments indicate:

- An increase both in the number and size of PFAS-related claims
- Courts recognising broader definitions of liability (as stated above)
- Plaintiffs pursuing damages for long-term environmental and health impacts

Recent developments, as well as those potentially to come may lead to subrogation cases, in which insurers seek reimbursement from responsible parties. Such cases will highlight the complex interplay between insurers, manufacturers, and regulators in addressing PFAS liabilities.

Over recent years, many carriers have recognised the necessity of understanding and quantifying their exposure to effect informed risk transfer. Insurers and reinsurers are grappling with the challenge of quantifying PFAS-related exposures across various lines of business, including general and product liability, environmental, D&O, and professional indemnity insurance. Qualitative and quantitative uncertainty is increasingly prompting attempts to limit coverage exposures.

Insurer underwriting strategies vary from light and/or selective limitations to total exclusion. In the US, PFAS exclusions can be seen as standard in insurance policies for clients with any form of PFAS exposure. Insurers in the Nordics tend to exclude, whereas other European regions show a mix, depending on the PFAS exposure represented by each client. Potential strategies to manage PFAS exposure also include higher deductibles, retentions, co-insurance and sub-limiting cover.

(Re)insurers are closely observing these developments in order to ensure alignment with their own underwriting strategies.

Tightening markets leave policyholders with limited options, underscore the importance of reviewing existing policies, engaging internal risk management processes and/or specialist brokers and legal advisers and acting swiftly on potential claims.

As regulatory scrutiny intensifies and scientific understanding evolves, the insurability of PFAS remains uncertain, posing significant challenges for landowners, businesses and the insurance industry alike.

Howden partners with clients to ensure that (re)insurance solutions are aligned with various strategies and regulatory requirements to avoid gaps in coverage.

PFAS Exclusions

Uncertainty surrounding unknown PFAS exposure complicates risk assessment and underwriting. Insurers are increasingly cautious, as latent contamination may result in future claims, affecting their willingness to accept risk.

In the EU market insurance policies increasingly include PFAS exclusions for elevated exposed risks to limit potentially catastrophic losses. This reflects a broader trend towards proactive risk management in the face of emerging environmental liabilities. PFAS exclusions still vary by market and insurer. Some exclude all liability arising from PFAS, whereas others are more targeted against certain compounds or claim scenarios.

Howden's focus is to find tailor-made solutions that do not hollow out insurance cover but rather create wordings with a razor-sharp focus on exposures to be excluded, avoiding a one-size-fits-all approach.

In line with the recent trend, Howden will support its clients in aligning reinsurance contracts with the insurance approach.



Conclusion

In conclusion, all stakeholders must adopt an informed, proactive and transparent approach to PFAS. Clients and brokers have a responsibility to provide underwriters with appropriate and adequate information. At the same time, carriers and brokers should enable data-based discussions, accept risks, and help the (re)insurance market to respond with adequate solutions.

By integrating scientific research, legal developments, and risk modelling into this discussion, Howden supports all stakeholders in navigating the challenges posed by these chemicals and in offering relevant client solutions, tailored to each circumstance.

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Howden Re: Elevating casualty reinsurance

We are a trusted partner, combining expertise across casualty lines with market-leading analytics. Our systematic approach leverages data and capital management insights to craft tailored reinsurance strategies that align with client objectives. Known for adaptation, innovation and strong negotiation, our casualty broking team consistently secures the best terms for clients. Our advanced analytics enhance core placements and support cedents in optimising gross-to-net strategies.

Key contacts

Every business
faces unique exposures,
let's talk about yours.

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About the Howden Re Casualty in focus insights series

Each edition will provide insight into the challenges facing the casualty market in today's environment, providing perspectives on emerging trends.

Whether you're managing global portfolios, advising clients, or assessing risk, this series offers the clarity and context needed to navigate complexity and uncover new opportunities.

[Click here](#) to revisit the previous edition.

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