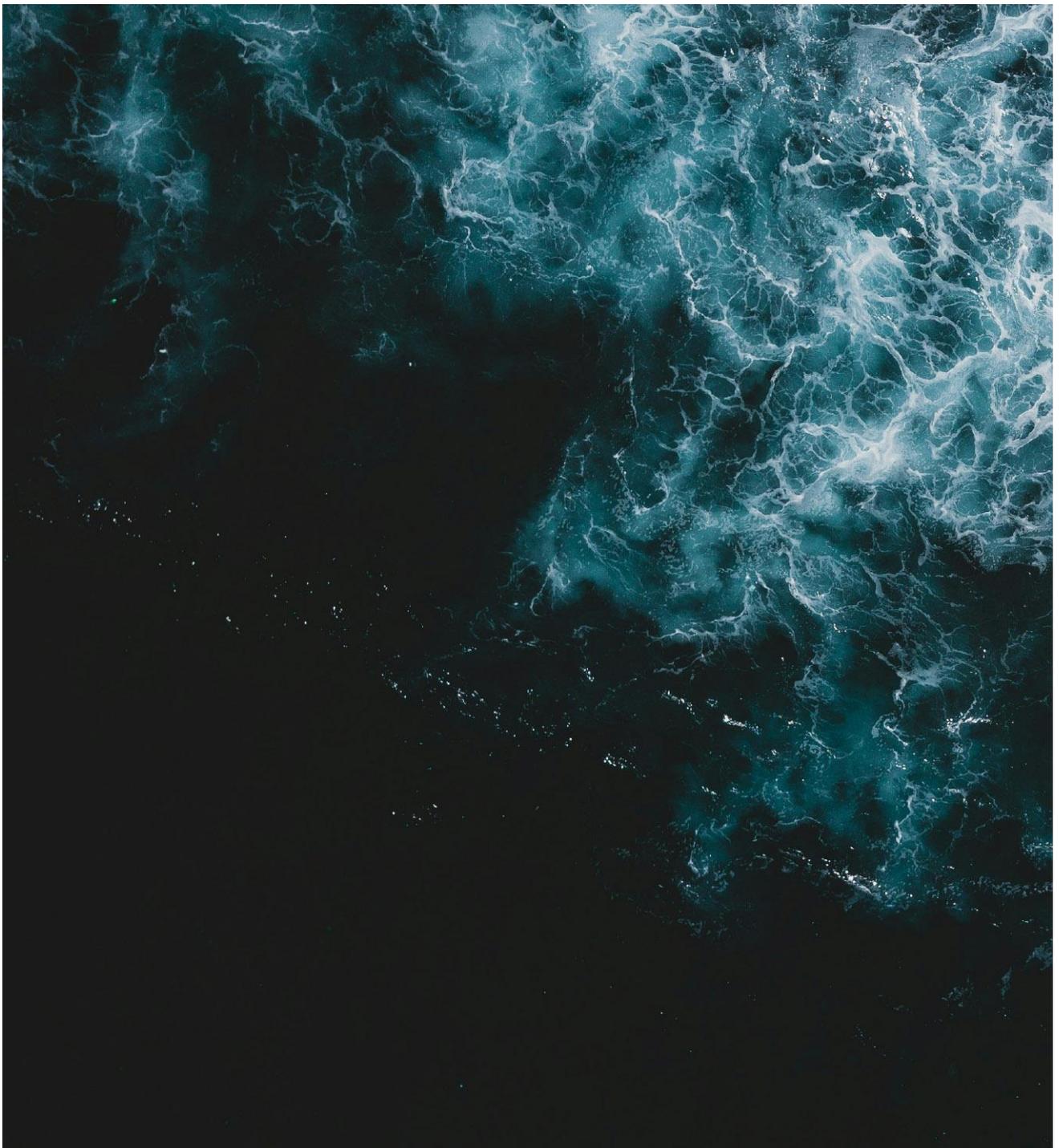


Client Information

# PFAS-containing fire-fighting foams

Persons affected, prohibitions, further obligations and sanctions

12/2025



Dear clients and interested parties,

with [Delegated Regulation \(EU\) 2025/1399](#) of 5 May 2025, the European Commission extended the transition period for the exemption for firefighting foams containing perfluorooctanoic acid (PFOA) under the [POP Regulation \(EU\) 2019/1021](#) ('POP Regulation') of 4 July 2025 by another five months to 3 December 2025. We already reported on this in our [blog post of 30 September 2025](#). This means that the legal framework for PFAS-containing firefighting foams will change at the end of 2025 or the beginning of 2026. Further exemptions also expired in the course of 2025, and further restrictions are already imminent, particularly in the course of 2026, or are foreseeable in the medium term.

In this client information, we summarise the key PFAS bans, exemptions, other obligations and impending sanctions relating to the bans on PFAS-containing fire-fighting foams under the POP Regulation and REACH Regulation. The client information is intended in particular to help companies that operate fire extinguishing equipment with fire-fighting foams to correctly check and assess the obligations relating to PFAS-containing fire-fighting foams that apply to them.

We hope you find this information useful and informative.

Your FRANSSEN NUSSER team

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## A. Who is affected by the PFAS ban in fire-fighting foams?

All parties involved in the manufacture, distribution, use, storage, maintenance or disposal of PFAS-containing fire-fighting foams are affected, in particular:

- Manufacturers, importers and distributors of fire-fighting foams,
- Operators of stationary extinguishing systems in buildings and industrial facilities,
- Works and professional fire brigades, airport/port/company fire brigades,
- Training and testing centres,
- Service providers for the maintenance, testing/cleaning of extinguishing systems and disposal companies, and
- Responsible persons in companies (management, environmental officers).

In particular, companies that operate fire extinguishing equipment with fire-fighting foams should therefore check whether the fire-fighting foams they have in stock may still be used.

## B. What does the POP Regulation stipulate for fire extinguishing foams containing PFAS?

The POP Regulation lays down rules for perfluorooctane sulfonic acid (PFOS), its salts and PFOS-related compounds, perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds, and perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds.

### I. Substance restrictions: (also) prohibition of use

According to Article 3 (1) of the POP Regulation, in addition to the manufacture and placing on the market, the use of PFOS, PFOA and PFHxS (including their salts and related compounds) is also prohibited, even if they are contained in mixtures or articles. The ban therefore also applies to the use of these PFAS in fire-fighting foams. Consequently, fire-fighting foams containing these PFAS may no longer be used in principle, even in the event of a fire.

#### 1. Exception: trace contaminants

However, the ban does not apply to substances that are present as so-called unintentional trace contaminants in substances, mixtures or articles (Art. 4 (1) (b) POP Regulation).

Annex I, Part A of the POP Regulation specifies the limit values for trace contaminants up to which the exception applies.

According to Annex I, Part A, Column 4 of the POP Regulation, the limit value for unintentional trace contaminants is 10 mg/kg = 0.001 % by weight for **PFOS** in mixtures such as fire-fighting foams.

For **PFHxS** or its salts, the general limit value for trace contaminants is 0.025 mg/kg = 0.000025 % by weight and for the sum of all PFHxS and PFHxS-related compounds is 1 mg/kg = 0.0001 % by weight, in each case for mixtures such as fire-fighting foams. In addition, there is a special limit value for trace contaminants in firefighting concentrate mixtures: If PFHxS are contained in concentrated

fire-fighting mixtures intended for or used in the manufacture of other fire-fighting mixtures, the concentration limit for PFHxS, their salts and PFHxS-related compounds is 0.1 mg/kg = 0.00001 % by weight. This exemption will be reviewed and evaluated by the Commission by 28 August 2026 at the latest.

For **PFOA** and its salts, a specific concentration limit for trace contaminants of 1 mg/kg = 0.0001 % by weight will continue to apply until 3 August 2028, if they are present in fire-fighting foam for combating vapours from liquid fuels and fires involving liquid fuels (fire class B) that has already been filled into systems. For the concentration of one or more PFOA-related compounds, the concentration limit until 3 August 2028 is 10 mg/kg = 0.001 % by weight. These exemptions will end on 4 August 2028, after which the general limit value for PFOA trace contaminants of 0.025 mg/kg = 0.000025 % by weight (as for PFHxS) will apply.

In addition, a special limit value of 10 mg/kg applies to the sum of the concentrations of PFOA, its salts and PFOA-related compounds when they are present in fluorine-free firefighting foam and originate from firefighting equipment cleaned in accordance with the best available techniques. The reason for this is that in fire extinguishers that were filled with PFOA-containing extinguishing agents, PFOA compounds remain in the extinguishers even after they have been cleaned in accordance with the best available techniques, contaminating the newly filled, PFOA-free extinguishing foam. This exceptionally high limit value is currently not limited in time.

## **2. Since 4 December 2025: No more general exemption for fire-fighting foams containing PFOA**

The general exemption for the use of fire-fighting foam containing PFOA (without a limit value for trace contamination), which was valid until recently, no longer applies since 4 December 2025. After the expiry of this exemption for fire-fighting foams, any remaining stocks of PFOA-containing fire-fighting foams that exceed the respective concentration limits for trace contaminants of 1 or 10 mg/kg (see above) as of 4 December 2025 must be managed as waste (Art. 5 (1) POP Regulation).

## **II. Disposal of PFAS-containing firefighting foams etc. as waste**

Owners of stocks consisting of PFOS, PFOA or PFHxS – including their salts and related compounds – or containing these PFAS compounds for which no use is permitted (in this respect, the limit values for trace contaminants shown above are particularly important), must manage these stocks as waste in accordance with Art. 5 (1) POP Regulation and Art. 7 POP Regulation.

According to Art. 7 of the POP Regulation, waste consisting of, containing or contaminated with substances listed in Annex IV (including PFOS, PFOA and PFHxS, including their salts and related compounds) shall be disposed of or recovered without undue delay and in accordance with Annex V, Part 1, in such a way that the PFOA compounds contained therein are destroyed or irreversibly transformed so that the remaining waste and releases do not exhibit the properties of POPs. Annex V, Part 1 only permits the following disposal methods:

- Disposal by chemical/physical treatment (D9);
- Disposal by incineration on land (D10);

- Recovery by primary use as fuel or other means of energy generation (R1); and
- Recovery/recycling of metals and metal compounds from residues from iron and steel production and lead-containing leaching residues from non-ferrous metal production (R4).

If certain concentration limits specified in Annex IV to the POP Regulation are not exceeded, the waste may also be disposed of or recovered in other ways in accordance with relevant Union legislation (Art. 7 (4) (a) POP Regulation). For PFOS, a concentration limit of 50 mg/kg applies; for PFOA and its salts, a value of 1 mg/kg; for the sum of PFOA-related compounds, a value of 40 mg/kg; and for PFHxS and its salts, a value of 1 mg/kg; for the sum of PFHxS-related compounds, a value of 40 mg/kg.

### C. What does the REACH Regulation stipulate for C<sub>9</sub>-C<sub>14</sub>-PFCA and PFHxA-containing fire-fighting foams?

The REACH Regulation regulates certain long-chain perfluorinated carboxylic acids (**C<sub>9</sub>-C<sub>14</sub>-PFCA**), including their salts and any combinations thereof, as well as undecafluorohexanoic acid (**PFHxA**), its salts and PFHxA-related substances.

A substance subject to a restriction under Annex XVII of the REACH Regulation may only be manufactured, placed on the market or used if the requirements of the respective restriction are complied with (Art. 67 (1) sentence 1 REACH Regulation).

**C<sub>9</sub>-C<sub>14</sub> PFCA** may no longer be manufactured or placed on the market as substances themselves since 25 February 2023; since 25 February 2023, they may only be used or placed on the market if the concentration in a mixture (fire-fighting foam) is less than 25 ppb for the sum of C<sub>9</sub>-C<sub>14</sub>-PFCA and their salts or 260 ppb for the sum of C<sub>9</sub>-C<sub>14</sub>-PFCA-related substances (Annex XVII, entry 68, column 2, nos. 1 and 2 REACH Regulation). Notwithstanding this, under certain conditions, the use of fire-fighting foams containing C<sub>9</sub>-C<sub>14</sub> PFCA was permitted until 4 July 2025 if they were used to combat vapours from liquid fuels and fires involving liquid fuels of fire class B and were already filled into mobile or stationary systems. This exemption also expired last year.

From 10 April 2026, **PFHxA** may only be used in concentrations of < 25 ppb for the sum of PFHxA and its salts or < 1,000 ppb for the sum of PFHxA-related substances in fire-fighting foams and fire-fighting foam concentrates for training and testing purposes (except for functional testing of fire extinguishing systems, provided that all releases are captured) and for public fire services (except for exclusive use in fires in accident-prone establishments) (Annex XVII, entry 79, column 2, no. 4 REACH Regulation). The same applies to civil aviation, including civil airports, from 10 October 2029 (however, without the exceptions for functional tests and for fires in establishments subject to major accident hazards).

### D. Are there any recommendations or guidelines for switching to PFAS-free fire-fighting foams?

The European Commission issued a recommendation in July 2025 on switching to PFAS-free fire-fighting foams. In addition, in August 2025, the German Federal/State Working Group on Waste

(LAGA) published guidance on handling PFAS-containing waste from firefighting tanks, fire extinguishers and sprinkler systems.

## I. What do the European Commission and ECHA recommend for the transition to PFAS-free firefighting foams?

To assist with the transition to PFAS-free firefighting foams, the European Commission published a [recommendation](#) in July 2025 in cooperation with the European Chemicals Agency (ECHA) and with the assistance of the Member States. In addition to outlining the legal framework and explaining the significance of PFAS, the recommendation provides guidance on the following aspects of the transition:

- Identification of existing firefighting foam;
- Disposal of PFAS-contaminated firefighting foam;
- Cleaning of equipment and other firefighting infrastructure that has come into contact with PFAS-contaminated fire-fighting foam; and
- Final conversion to the use of PFAS-free firefighting foams ('F3' = fluorine free foams) with important key points and notes.

It is particularly emphasised that there is no universal solution ('one size fits all'). To ensure a smooth and effective transition, national regulations as well as the organisation's own system and equipment should be taken into account in the planning and implementation of the process. When selecting the new fluorine-free fire-fighting foam, operators are required to explicitly check that it is fluorine-free in order to ensure compliance with the limit values. In this context, attention should be paid to the labelling 'fluorine-free', 'F3' or 'PFAS-free'. Only these compositions are PFAS-free, while 'PFOS-free' or 'PFOA-free', for example, does not exclude the presence of other PFAS. At the same time, the further composition should be checked, as some manufacturers of fire-fighting foam substitute PFAS with other chemicals that may themselves be subject to national or European regulations.

## II. What does the LAGA guidance recommend for fire-fighting foams containing PFAS?

In August 2025, the Federal/State Working Group on Waste (LAGA) published a [guideline on the handling of PFAS-containing waste from firefighting tanks, fire extinguishers and sprinkler systems](#) (see also our [blog post from 10 September 2025](#)).

When replacing foam agents, LAGA recommends taking into account that PFAS tend to adhere to surfaces (e.g. tank walls, pipes). These adhesions would be released over time. Therefore, after removing PFAS-containing fire-fighting foams and before refilling, it is necessary to thoroughly clean the entire system. Otherwise, the permissible concentration limits for unintentional trace contaminants in accordance with the POP Regulation (see above) may be exceeded.

LAGA also recommends that liquid and solid waste from the replacement, maintenance and cleaning of PFAS-containing fire-fighting equipment be classified as hazardous. Rinsing water and objects cleaned with this rinsing water are considered to be sufficiently cleaned if an AOF value (adsorbable organically bound fluorine) of < 5 µg/l is detected in the rinsing water.

Various German state governments are currently developing their own enforcement guidelines for the classification and disposal of waste from the replacement of PFAS-containing fire-fighting foams.

#### **E. What penalties are imposed for violations of PFAS bans and other obligations in connection with PFAS-containing fire-fighting foams?**

##### **I. What are the penalties for violations of the provisions of the POP Regulation and the REACH Regulation?**

Violations of substance restrictions or bans under the POP or REACH Regulations lead, among other things, to statutory marketing bans, which are generally also relevant under competition law. It is also possible for the authorities to order the recall and withdrawal of fire-fighting foams that have been placed on the market illegally. Bans on the use or operation of PFAS-containing fire-fighting foams and the imposition of replacement and cleaning requirements are also conceivable. Ultimately, bans on use under building regulations, for example for businesses/business units that still use PFAS-containing firefighting foams in their extinguishing systems, are also conceivable. No fault (intentional or negligent action) is required for the ordering and enforcement of all these official measures; the same applies to the enforcement of injunctive relief under competition law.

The aforementioned legal instruments are flanked by largely unknown administrative offences and criminal offences in the German Chemicals Sanctions Regulation and the German Chemicals Act (or other national laws of other Member States). Culpable violations of the above-mentioned prohibitions of the POP and REACH Regulations can therefore also lead to criminal investigations by the competent public prosecutor's office and, in the worst case, to corresponding court judgements. In addition to fines, imprisonment is also possible, although this is rather unlikely in practice. Violations of the waste management obligations of the POP Regulation can ultimately be punished in Germany as administrative offences with fines of up to EUR 50,000.

##### **II. What are the consequences of water or soil contamination caused by the use of PFAS-containing fire-fighting foams?**

If the use of PFAS-containing fire-fighting foams near water and without collecting the extinguishing agents used leads to soil and/or groundwater contamination, criminal liability may also be considered under Section 324 (1) of the German Criminal Code (StGB) for water pollution and under Section 324a (1) StGB for soil contamination. These offences also require culpable conduct.

##### **III. Who is held responsible for violations of PFAS bans in a company?**

To date, German criminal law does not recognise corporate criminal law. Only natural persons can engage in criminal conduct. The same applies in principle to administrative offence law; however, in this case, fines can also be imposed on the company alone in separate proceedings.

Criminal investigations, but also hearings in administrative offence proceedings, regularly address the authorised representatives (managing directors, board members) of a company first. The extent

to which these tasks and the associated fulfilment of due diligence obligations have been effectively delegated to managers within the company is a question that must be assessed in each individual case. If this is the case, the delegate (employee) can also be prosecuted.

After all, members of the management are fundamentally obliged to take organisational measures to ensure that no violations of the law are committed in or as a result of business operations. With regard to the obligations under the POP and REACH Regulations, this means that management must ensure that the company has an adequate material compliance organisation in place. A violation of these organisational obligations may also constitute an administrative offence punishable by a fine in individual cases.

#### IV. What do companies need to bear in mind now?

The use of PFAS-containing fire-fighting foams is already significantly restricted by the requirements of the POP Regulation and REACH Regulation. Operators must manage already filled systems and waste in such a way that bans, deadlines and limit values are complied with and, where relevant, transitional and exemption provisions are correctly applied in order to avoid sanctions. At the same time, an orderly transition to PFAS-free fire-fighting foams should be planned, taking into account the recommendations of the EU Commission, ECHA and LAGA.

In particular, the following deadlines must be observed:

<b>PFAS</b>	<b>End of the exemption for fire-fighting foams</b>
PFOS	27 June 2011
C <sub>9</sub> -C <sub>14</sub> -PFCA	4 July 2025
PFOA	3 December 2025
PFHxA	10 April 2026 / 10 October 2029 (civil aviation)
PFHxS	Review on 28 August 2026

FRANSSEN NUSSER has many years of comprehensive expertise in environmental, product and circular economy law as well as ESG issues. Please feel free to contact us.



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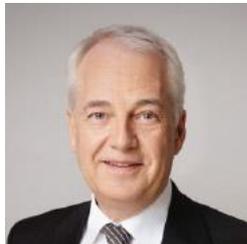
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