



OILTECHNICS
FIRE FIGHTING
PRODUCTS



UK & EU FOAM UPDATE

**Offshore Installations:
PFAS in Firefighting Foams**

May 2024

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This update highlights the most important firefighting foam regulatory developments relating to offshore oil and gas installations - ensuring you are kept informed.

- > UK Regulations confirm it is ONLY **legacy C8-foams** containing or breaking down to PFOA, which are **restricted** (see details under section 3 below).
- > High purity short-chain **C6-foam alternatives are allowed** for continued use in UK Offshore installations (see details under section 4 below).

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1

EU (ECHA) PROPOSED C6-AFFF TRANSITION PERIODS UNDER DRAFT LEGISLATION ON PFAS RESTRICTIONS FOR FIREFIGHTING FOAMS

The European Chemicals Agency (ECHA) has proposed the following transition periods from Fluorinated Foams to Fluorine Free Foams (F3) under the PFAS Firefighting Foam restriction legislation proposals, which are undergoing further consideration by the European Commission in advance of draft legislation release.

- > Transition periods proposed vary depending on sector and were based on availability of suitably effective alternatives, capacity for containment of releases during use (eg. bunding) and time required to practically implement transitions (including system design adaptation, equipment changes, availability, cleanout during shut-down, maintenance periods etc).
- > These are more extensive restrictions covering **concentrations of TOTAL PFAS greater than 1mg/L (1,000ppb or 1ppm)**, but still retains transitional periods of:
 - > **18 months** after Entry into Force (EIF) for firefighting foam training/testing and use by municipal fire services.
 - > **5 years** after EIF for use by civil aviation and defence (although defence is understood to be subject to national security review by each State, which could extend the transition period).

Final SEAC opinion in June 2023 confirmed:

Sector/type of use or placing on the market	Transitional period after Entry into Force [#]
> Seveso III establishments	10 years
> Offshore installations	10 years*
> Civilian aviation	5 years
> Defence	3 years
> Municipal fire services	18 months
> Ready-to-use applications	5 years
> Marine applications	5 years*
> Other industries	3 years
> Foam for training and testing	18 months*
> Formulation	10 years

These FINAL EU PFAS Firefighting Foam Restriction regulations are expected to become legislation later in 2024, with Entry Into Force (EIF) probably during 2025.

All Aberdeen AFFF Firefighting Foams are stringently monitored during production to ensure they meet acceptably low trace quantities of PFOA and other PFAS of concern, which are well below threshold levels, so they fully comply with all EU and UK current regulations.

- * As detailed above, this transition period is currently a *recommendation* by SEAC.
- # These periods have been proposed, but *some may gain possible extension* following consideration of public consultation submissions.



2

**EU (ECHA) DRAFT PFHxA RESTRICTION LEGISLATION,
29TH MARCH 2024**

The European Chemicals Agency (ECHA) draft PFHxA Restriction legislation, published on the 29th March, is mostly NOT relevant for Offshore Installations ... *except for training, system testing and Personal Protective Equipment (PPE).*

- > From **18 months** after Entry into Force (EIF), it **prevents C6-foam use for firefighter training or system testing** (*unless all releases are contained, collected and disposed of safely, according to local regulations eg. high temperature incineration >1,100°C*).
- > From **18 months** after EIF, it **prevents C6-foam use for municipal fire services (brigades)** *with the exception of their intervention at Seveso III sites* (under Directive 2012/18/EU).
- > From **5 years** after EIF, it **prevents C6-foam use for Civil Aviation, including civilian airports** *with the exception of offshore installations' helidecks/pads*.

The draft legislation imposes a limit on substances, mixtures and articles containing PFHxA as follows:

- > Restriction is applied to concentrations equal to or greater than:
 - > **25ppb (25µg/kg)** for the sum of **PFHxA and its salts**
 - > **1,000ppb (1,000µg/kg)** for the sum of **PFHxA-related substances** (measured in homogeneous material)
- > From **24 months** after EIF, it restricts use for textiles, leather in clothing and accessories, footwear, food contact materials, mixtures and cosmetic products **for general public**.
- > From **36 months** after EIF, it restricts use for textiles, leather, furs, hides in products **other than clothing and related accessories for general public** - *with the exception of Personal Protective Equipment (PPE)* within scope of risk category III points a,c,d,e,f,h,l (**including firefighters**) and construction textiles.

This legislation is expected to be passed into law by the European Commission in the coming months, in advance of any binding restrictions under EU PFAS restrictions in Firefighting foams. This legislation is intended to achieve earlier control in these specific categories where alternatives already exist.

3

UK LEGISLATION: OFFSHORE INSTALLATIONS

The emergency use of more benign C6-Foams will continue to be permitted for UK Offshore Installations.

- > These foams **do not contain PFOA or PFOA-related substances**: they only contain small amounts of high purity short-chain PFAS compounds of six or less carbon chain compounds, contained in firefighting foams to retain the fast acting, film forming, fuel shedding characteristics of freeze protected high performance AFFFs.
- > They are used with seawater for a wide range of offshore oil and gas platform uses, including helideck/helipad fire protection.
- > Alternative synthetic Fluorine Free Foams (F3s or SFFFs) do not meet the stringent fire testing requirements for efficient and reliable use in seawater at low temperatures down to -18°C , nor are proven effective through non-aspirated devices offshore.

UK Regulations allow the continued use of these C6-foams for emergency firefighting use on Offshore Installations indefinitely.

- > There are no known F3 or SFFF alternatives offering equivalent functionality or approvals for such low temperature (-18°C), seawater use and often non-aspirated applications.



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UK LEGISLATION: LEGACY C8-FOAMS

Due to mostly historical issues of over-use and poor containment, the UK Environment Agency (EA) is prohibiting the use of firefighting foams containing long-chain C8 PFAS compounds.

- > Long-chain C8 PFAS compounds contain more than six but mostly eight or longer carbon chain compounds and may inadvertently contain or break down to PFOA, PFOS or PFHxS (PFHxS is classified by UN as a C8-PFAS).
- > These legacy C8-foams are being prevented from use due to:
 - > human health concerns
 - > adverse environmental impacts, and
 - > being listed as Persistent Organic Pollutants (POPs) under the UN Stockholm Convention.

UK POPs (Persistent Organic Pollutants) Regulations currently prevent the use of these legacy C8-foams for any system testing or firefighter training.

- > **Legacy C8-foams** - containing more than 25ppb PFOA, its salts or 1ppm PFOA-related substances - **cannot be used for emergency firefighting use after 1st January 2023**, *except where ALL releases can be contained, collected and prevented from entering the environment.*
- > Wherever possible, **these foams should NOT be used** and replaced with a more benign suitable alternative.
- > **From 4th July 2025, ANY use of legacy C8-foams is prohibited.**
- > Any residual legacy C8-foam stocks should be safely removed, contained and disposed of safely according to Environment Agency requirements.
- > **ALL legacy C8-foams are already prohibited from use across the EU.**



5

EU (ECHA) PROPOSED UNIVERSAL PFAS BAN FOR ALL USES OUTSIDE FIREFIGHTING FOAMS

The EU is also proposing a Universal PFAS ban for all other uses outside Firefighting Foams, with draft legislation expected Q3/Q4 2025 and becoming effective in force Q1 2026.

- > This draft legislation includes fluorinated fire suppressant gases (F-gases) and personal protective equipment (PPE).
- > It covers PFAS concentrations of:
 - > **25ppb** (25µg/kg) or above for **any PFAS** (measured with targeted analysis – excluding polymeric PFAS).
 - > **250ppb** (250µg/kg) **sum of PFAS** (measured with targeted analysis – excluding polymeric PFAS).
 - > **50ppm** (50mg/kg) of **PFAS** (polymeric PFAS *included*).

Proposed transition periods:

- > For **firefighting PPE** - until **13.5 years** after Entry into Force (EIF).
- > For **clean fire suppressing agents** (where current alternatives damage assets to be protected or pose a risk to human health) - until **13.5 years** after EIF.
- > Justifications are expected from different sectors where equivalent functionality is not yet available from alternatives, potentially requiring transition periods of 5 or 6.5 years, up to 13.5 years according to strength of evidence presented.



6

WHAT HAPPENS NEXT: TESTING & CLEANING SYSTEMS

If you need to replace any existing PFAS-containing foam (legacy C8-foam or C6-foam for training/testing), you need to follow Environment Agency advice about cleaning existing systems, containment and safe disposal of removed concentrate and washwater from system cleaning.

Testing AFFF Foam Concentrates for PFAS Compliance is necessary - and Oil Technics can help you!

- > **TOP** (Total Oxidisable Precursors) Assay or **TOF** (Total Organic Fluorine) can be important to determine residual levels of PFAS in any final rinse water after tank cleaning, before refilling with new F3 agents.
- > This can provide verification to regulators that the tanks are adequately clean and the new foam is not contaminated with any unintended residual legacy PFAS - above stringent acceptance levels.
- > Many foam users have a range of foam stocks which may vary in age, may have mixed brands, or contain different batches present. It is therefore important to establish whether these older stocks meet current UK POP regulations. If not, they will have to be disposed of safely using high temperature incineration (>1,100°C).

Oil Technics can facilitate such testing of your foam concentrates to ensure that existing foams are C6 compliant, do not contain legacy long-chain C8-PFAS chemicals (eg. PFOS, PFOA or PFHxS) and thereby would not meet current UK POPs or EU PFAS restriction regulations.

- > Oil Technics Foam Testing Service can arrange PFAS content testing of specific foam concentrates for which you may have concerns, which can be conducted at competitive rates.
- > This will be carried out by specialised and approved laboratories, qualified to conduct such PFAS content analysis on your behalf, with a report on the regular 28-suite PFAS assessment (identifying how much PFOS, PFOA, PFHxS, PFHxA and other common legacy PFAS may be present), with analysis report provided accordingly.
- > However firefighting foams often contain a variety of more difficult to determine pre-cursor chemicals which degrade over time to known end-point PFAS, such as PFOS, PFOA and PFHxA. To quantify the total amount of such PFAS pre-cursors and end-points present, an additional analysis is required.

- > Either TOP Assay or TOF Analysis, conducted at extra cost to regular 28-suite PFAS testing, this additional analysis **importantly verifies the total level of PFAS present in any specific representative sample of existing bulk foam tank stocks.**
- > This is also a valuable test to conduct on final rinse water when cleaning foam storage tanks, to verify residual levels of PFAS do not exceed Authority's mandated requirements.
- > TOP or TOF analysis can also be used to verify that any replacement Fluorine Free Foams (F3) being purchased do not unintentionally or inadvertently contain PFAS above accepted trace levels, so are acceptable before decanting into pre-cleaned storage tanks.
- > EU acceptance levels in ECHA's (European Chemicals Agency) recent SEAC (Socio-Economic Analysis Committee) draft opinion is **currently proposed at 1ppm of residual PFAS in cleaned tanks, final rinse water and NEW F3 concentrates.** It has been made clear to ECHA this residual level does not provide any increase in effectiveness of foam concentrates, indicating this limit value is sufficiently low to prevent intentional use of PFAS in non-fluorinated or fluorine-free foam (F3 or SFFF) firefighting foams
- > Considering the high cost of removing last traces of contamination in complex offshore systems, **SEAC supported the proposal of a higher residual limit value of 50ppm PFAS, specifically for offshore cleanout of already PFAS contaminated foam systems.** This should be verified with the Environment Agency if you are cleaning out systems for testing/training (although providing a new 1,000L IBC may be an appropriate alternative option).



- > Testing of your foam concentrate by a qualified specialised laboratory is important to verify its composition. This will determine whether it needs replacing or not, as stockpiles of legacy C8-foam concentrate (greater than 50 kg) or C6-foam that does not conform with current Environment Agency (EA) restrictions, must be:
 - > notified to the EA.
 - > quarantined, labelled and no longer used.
 - > safely disposed of, appropriately to EA (eg. high temperature incineration >1,100°C).

Oil Technics can offer TOP Assay or TOF Analysis testing to ensure foam concentrates comply with local regulations and policies.

We only require 250 mL of foam concentrate, provided in bottles we will supply, to determine accurate PFAS levels.

- > TOP Assay is a hydroxyl radical based oxidation reaction. Precursors are transformed to end-point carboxylic or sulfuric perfluoroalkyl acids (PFAAs) in such reactions. The evaluation of pre- and post-TOP Assay data can therefore offer a clear view of total PFAS present in specific samples.

To enquire about having your foam TOP Assay or TOF Analysis tested, please contact us:

E-mail: technical@foamtesting.com

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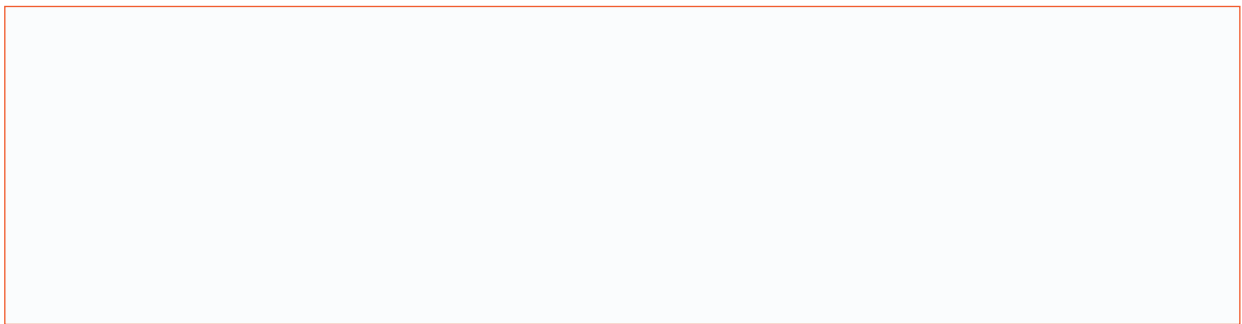
THE IMPORTANCE OF STAYING INFORMED

It is important to us that you are kept informed and encouraged to remain within UK firefighting foam regulations. Although the regulatory environment is complex and seems confusing, we are trying to simplify what you need to know, and what happens next.

If you have any extra questions to those answered above or would like any further details on any of the content provided (although every effort has been made to ensure this is accurate), please don't hesitate to contact us.



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