

## Guidance Note



**Fire Industry Association**

Leading Excellence in Fire Since 1916

## **FIA Guidance: PFAS in Firefighting foams Restrictions Update July 2025**



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## 1. Current situation

In the UK there is currently no legal restriction on the supply or refilling of current fluorotelomer based (C-6/PFHxA) AFFF in fire extinguishing applications including fire extinguishers.

By way of background since at least the last ten years, all AFFF has been based on fluorotelomer chemistry which does not contain PFOS/PFOA (C-8) or PFHxS. Prior to that date AFFF was likely to contain PFOS/PFOA. PFHxS was not used in firefighting foams but is a breakdown product of PFOS/PFOA.

PFOS/PFOA/PFHxS are chemicals covered by UK and EU REACH & POPs (Persistent Organic Pollutants) Restrictions which ban their use at certain concentrations. The concentrations of these chemicals in AFFF used in fire extinguishing applications is above that threshold. PFOS and PFHxS are already banned.

The transition period for PFOA ended on 4<sup>th</sup> July 2025 and any extinguishers or systems containing these should have been replaced.

Refilling extinguishers or fixed systems which have contained PFOS/PFOA/PFHxS with fluorotelomer foam will not make them exempt from the PFOS/PFOA/PFHxS bans. This is because they will still contain trace amounts of the chemicals above the prescribed limits.

## 2. Definitions/abbreviations

### AHJ

Authority having Jurisdiction.

### EIF

Entry into force.

### Gen-X – or HexaFluoroPropylene Oxide (HFPO)

a C6 short-chain alternative non-stick coating to C8-PFAS. This is not used, nor should be found in firefighting foams.

### mg/kg or mg/Litre –

equates to 1 part per million (ppm).

### µg/kg or µg/L

equates to 1 part per billion (ppb).

### ng/kg or ng/L

equates to 1 part per trillion (ppt).

### PFAS

Per & poly fluorinated substances - the generic term for all fluorinated compounds including fluorotelomer foams.

### PFOS

Perfluorooctane sulfonate.

### PFOA

Perfluorooctanoic acid.

### PFHxA

Perfluorohexanoic acid.

### **PFHxS**

Perfluorohexanesulphonic acid.

### **POPs**

Persistent organic pollutants - POPs are regulated worldwide by the Stockholm Convention and the Aarhus Protocol.

### **PFAS-free or Fluorine Free Foams (F3)**

Foams without any intended PFAS added.

*Note: These foams may still contain traces of PFAS from the manufacturing process and water used, but the total PFAS contamination level is required to be below 1ppm level (1mg/kg) in EU, although lower limits of 1ppb (1µg/kg) total PFAS apply for F3s in USA by US Department of Defence's New F3 MilSpec (Jan.2023). US EPA has also set extremely low drinking water PFAS restriction levels of 4ppt (4ng/kg) for PFOS & PFOA and 10ppt for PFHxS, PFNA and Gen-X.*

### **TOP-Assay or TOPA**

Total Oxidisable Precursor Assay, a laboratory analysis method to establish the contamination level of all PFAS in samples of firefighting foam concentrate, foam solution or system rinsing water, to verify unintentional trace contamination (UTC) levels. Only a qualified, registered laboratory should be used for such testing.

### **TOF**

Total Organic Fluorine, a laboratory analysis method to establish the contamination level of all PFAS in samples of firefighting foam concentrate, foam solution or system rinsing water, to verify unintentional trace contamination (UTC) levels. Only a qualified, registered laboratory should be used for such testing.

### **UTC**

Unintentional Trace Contamination (often referring to PFAS).

## **3. Going forward**

### **3.1 EU**

#### **3.1.1. PFHxA Restrictions**

ECHA, the EU body for REACH restrictions, are proposing 2 REACH restrictions that would ban PFAS in firefighting foams in the EU.

The first of these which covers applications of PFHxA, (EU) 2024/2462 and was published in the Official Journal of the EU on 19 September 2024. This is the date of entry into force.

Although PFHxA (the main C6 breakdown chemical) would effectively cover all current firefighting foams the restriction limits itself to 3 specific applications of PFHxA two of which involve firefighting foams"

- Textiles and from 10 October 2027 it is banned in amounts over 25ppb but does not apply to PPE covered by the PPE Regulation
- Firefighting foam for training and testing and Public FRS (except COMAH sites i.e. industrial chemical sites) from 10 April 2026 it is banned in amounts over 25ppb.

- Firefighting foams for Civil aviation from 10 October 2029 is banned in amounts over 25ppb.

It doesn't cover portables and fixed systems as they are covered by the firefighting foam restriction which has yet to be published.

Note: Some EU Member States may interpret this differently.

The text of the restriction is available but not yet published in the Official Journal of the EU, therefore not yet in force.

It doesn't impact the UK other than for export purposes and influencing the DEFRA/HSE consultation process for the UK restriction.

#### b) Existing restrictions

##### **3.1.2. REACH Extension of PFOA use until 3 December 2025**

Under EC REACH regulation 1907/2006 the exemption for continued use of PFOA in firefighting foams expired on 4th July 2025. It is expected an extension will be granted (during Q1, 2025) for Companies under this exemption to comply with substituting any existing PFOA foams with alternatives, in an attempt to encourage a broader transition to PFAS-free or Fluorine-Free Foams (F3s).

The Commission proposes to extend the specific exemption from July until 3 December 2025, the latest possible date under the current specific exemption of 5 years in the Stockholm Convention.

##### **3.1.3. Unintentional trace limit for PFOA in firefighting foam and foam systems**

The EU Issued a draft regulation in November 2024 amending regulation 2019/1021 regarding PFOA, its salts and PFOA-related compounds. A 1ppm (1mg/kg) limit of unintentional trace contaminants (UTC) is set for any individual PFOA-related compound or combination of PFOA-related compounds in substances, articles or mixtures, which includes all firefighting foams including PFAS-free alternatives.

It also recognized that PFOA-related compounds may be present in higher concentrations as UTCs in firefighting foams already installed in foam systems. Accordingly, it confirms a 10ppm limit should be set for any PFOA-related compounds found in fluorine free firefighting foams (F3s) installed after cleaning of the firefighting foam system that replaces foams containing PFAS.

##### **3.1.4. Final draft regulation on PFAS in Firefighting Foams**

This final draft regulation amending Annex XVII to regulation (EC) 1907/2006 was issued on 18th November 2024. It confirms a PFAS limit equal to or lower than 1ppm (1mg/kg) for the sum of all PFAS in firefighting foams. Total fluorine analytical methods (TOP-Assay or TOF) may be used to verify compliance with the restriction.

A general transition period is set for 5 years, effective 18 months after the regulation's Entry Into Force (EIF), with the following exceptions, where these PFAS foams are used against fires involving flammable liquids (Class B fires):

<b>Sector Category</b>	<b>Transition period (effective 18 months after EIF)</b>
Portable fire extinguishers	12 months
Except Alcohol resistant foam fire extinguishers	18 months
Firefighter training and system testing (provided that all PFAS-foam releases are contained and disposed of safely)	18 months
Municipal Fire Brigades	18 months
Except when responding to Seveso III sites	10 years
Seveso III Sites (e.g. Refineries, chemical plants, bulk flammable liquid storage sites etc.)	10 years*
Offshore Oil and Gas installations	10 years*
Launch facilities for Space industry	10 years
Civil Aviation and Defence	5 years
Naval ships	10 years*
Civil ships - already in service	10 years*
Civil ships – new builds	5 years
All other sectors	5 years unless specified
<i>The transition period is to be reviewed before the period ends, as further extension may be necessary if equivalent alternatives are still not available.</i>	

Users of PFAS-foams are required to implement adequate measures (within 12 months after EIF) to reduce any release of PFAS into the environment, to a level that is as low as technically and practically possible. This includes collection for adequate treatment of used PFAS-foam and PFAS-containing wastewater, including waste from cleaning of systems and equipment.

Adequate treatment excludes biological wastewater treatment (Sewage) but should include high temperature incineration (at or above 1,100°C) or other process acceptable to the Authority Having Jurisdiction (AHJ).

Users of firefighting foams should prepare a Management Plan, to include information on use conditions, volumes, collection and adequate treatment, minimization of emissions, cleaning etc. Such emergency management plans must be kept available for inspection by enforcement authorities.

All foams and wastewater must be labelled when containing PFAS in concentrations above 1ppm (1mg/L).

**The Regulatory Annex also confirms the concentration of PFAS in F3s originating from and present in equipment/systems that have undergone cleaning (excluding portable extinguishers), shall not exceed 50mg/L (50ppm) for the sum of all PFAS as UTCs (up from previously 10ppm).**

### **3.2 UK**

#### **3.2.1. New restrictions**

In the UK DEFRA/HSE have started a consultation for a UK REACH restriction on PFAS in firefighting foams. They are currently in the consulting industry, and a public consultation will be held in 2025.

It is unlikely that any UK restriction will be in place prior to 2026. Any transition periods would likely be similar to those in the proposed EU restriction i.e. 18 months for firefighter training/system testing and Municipal Fire Brigades (except use at large industrial sites), 5 years for portables, marine uses, aviation and defence, 10 years for offshore installations, major industrial sites (COMAH/Seveso III e.g. Refineries, chemical plants, major fuel storage facilities etc.), civil ships already in service and Naval ships. It is unlikely that we'll see any total ban for specific applications prior to 2030 at the earliest.

#### **3.2.2. Existing restrictions**

If the EU amendment to the PFOA restriction goes through it is unlikely that the UK will follow suit as this would require and change in legislation that would need Government approval.

## **4. Impact of Restrictions**

Note: any total PFAS ban would impact:

- any waterbased extinguishers that contain PFAS e.g., AFFF, wet chemical and some water additives.
- Fixed foam systems -
- Fire Service use – F&RS, Military and airport and Petrochemical
- Foam enhanced Waterbased fixed systems – sprinklers, watermist

As with previous such bans, we would expect there to be considerable supply-side issues such as manufacturers clear stock, move to new fluorine free product, etc.

Many manufacturers/suppliers, but not all, have already moved away from fluorinated foam production, some are continuing supply of C6-PFAS foams throughout the transition periods, hence refill and purchase may become more complicated and risky for the operational sustainability of existing foam systems in case of activation. Reserve PFAS-foam stocks are therefore recommended where F3 transition may be delayed.

There will also be increased demand for disposal of extinguishers and PFAS-foam concentrate containing these restricted chemicals.

This would likely have a significant impact on the market and end users and their suppliers should be mindful of this.

## **5. FIA Position**

We (FIA) are recommending people start to plan for a move to fluorine free agents particularly where restriction extensions are short, but for the longer 10 year exemptions there is more time. It should be noted that there is no in force legal requirement yet in UK nor EU (at time of writing July 2025).

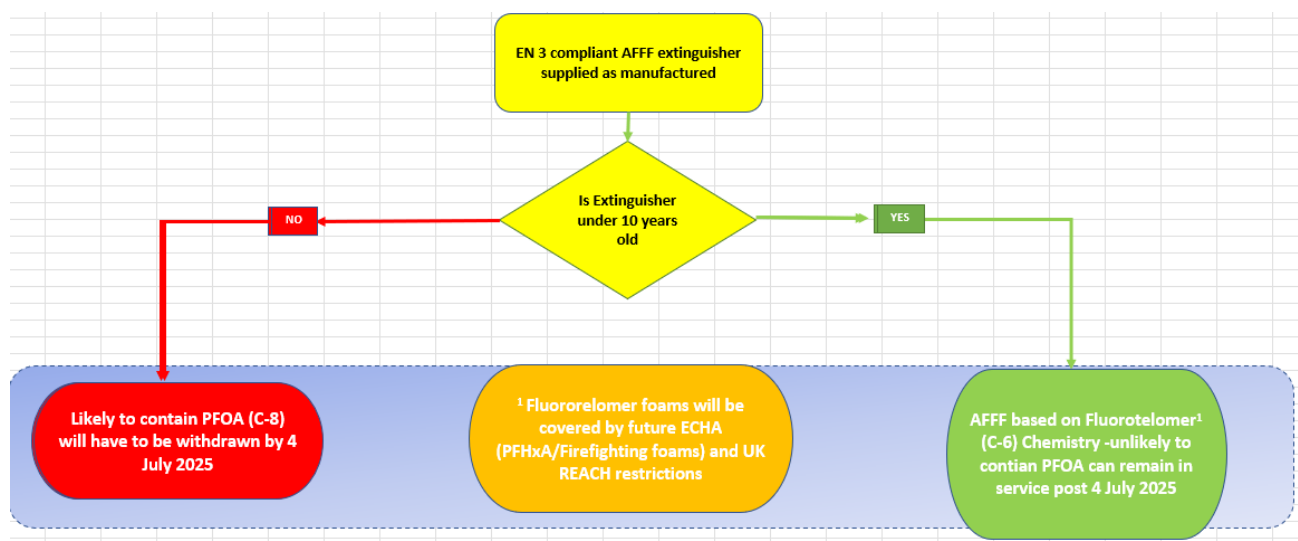
If transitioning, please check equivalent fire testing approvals and application rates for the fuels being stored/used in bulk, to ensure your fire safety is not being unintentionally compromised.

FIA is also discussing the disposal of PFAS foams with the UK waste companies.

When further regulatory dates are confirmed, FIA will issue more precise guidance.



## Annex A Summary PFOA in portable fire extinguishers



### DISCLAIMER

The information set out in this document is believed to be correct in the light of information currently available, but it is not guaranteed and neither the Fire Industry Association nor its officers can accept any responsibility in respect of the contents or any events arising from use of the information contained within this document.



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