

Transition to **Fluorine Free Foam**

Why a foam transition?

Extinguishing foam has been an important tool in industrial fire fighting for many years. Reliable, widely applicable and affordable. In the widely used fire-fighting foam types, fluorinated carbon molecules are the effective substance. This group of substances is better known as PFAS (per- and polyfluoroalkyl substances). In addition to fantastic extinguishing properties, these substances also have important disadvantages. They are demonstrably persistent, bio-accumulative and toxic (PBT). This has prompted the EU to introduce a ban on PFAS-containing products, including fire-fighting foams with carbon chains of eight and above (C8), from 4 July 2020.

The ban initially concerns the production and selling of products containing PFAS. The use of available stocks is not yet prohibited. The process leading to a total ban is expected to be completed by mid-2023. Fluorinated fire-fighting foams based on short(er) chains (C6) are still allowed, although the proposal to ban these products in the long term was submitted at the end of 2019.

Therefore, the transition to fluorine free firefighting foam (F3) is necessary. Effective F3 alternatives are available for many applications. The transition itself, however, is more than simply replacing product A with product B. Not only are the product properties often different, but F3 foams are also less generically applicable.

What are the consequences for us?

The replacement of your fire-fighting foam by a suitable fluorine-free alternative, starts from awareness and insight. Depending on the complexity and size of your systems, this process requires a solid step-by-step plan or even a fully-fledged management of change cycle. In all cases you should go through the following four phases and good preparation will pay off.

Phase 1: Awareness

- Regulations change
- Mid-2023 the process needs to be completed
- Transition requires more than simply replacing the foam product

Phase 2: Insight

- Where do we use foam and for what type of scenarios?
- What type of foam are we using and how much is at stock?
- What type of application installations and equipment do we have?

Phase 3: Impact analysis

- What are the specs a replacement should meet?
- Which potential challenges can be identified in our systems?
- Foam selection and testing
- Design of mandatory adjustments
- Investment estimate, budget allocation and transition planning

¹ PFAS: Perfluoroalkyl substances: a group of at least 4000 substances including PFOA (Perfluoro octanoic acid).

² ECHA, Annex XV Restriction report 20-12-2019; p. 80: transition period of 5 years; for tanks > 500 m² 12 years.



FALCK

Transition to **Fluorine Free Foam**

Phase 4: Implementation

- Prepare and purchase products and equipment needed
- Secure safety in actual transition/ adjustment of installations
- Actual replacement and adjustment
- Acceptance tests and after-action review

Timeline

Preparing your organization for a timely and effective foam transition takes time. Complexity and size of your secured installations, substances involved, fixed or mobile systems, affect the time to complete the impact analysis and implementation phase. For example, a timeline for transition on a complex site with fixed foam systems could look like this:

- **Inventory and insight**
3 months
- **Impact analysis and testing**
9 months
- **Decision-making**
3 months
- **Implementation**
12-18 months

The total turnaround time, especially when specific tests are required and the execution of the work needs to be aligned with a stop and turnaround planning, quickly exceeds 2 years. Given this fact, the available transition time of 3 years requires a timely start.

Falck helps

As a partner in safety and supplier of industrial fire services, Falck has the knowledge to support you in this process. We are competent to guide your foam transition for you and to unburden you in this process to a significant extent. We can assist for one specific site and, given our international presence, also are capable to assist in a multinational process. In close cooperation we will make a proper analysis of the scope and impact of the transition. We provide independent advice and can facilitate you in selecting an appropriate solution. During the actual replacement and adjustment of systems, Falck can provide temporary capacity to secure safety and an effective incident response on site.

For information, please contact
Berthil van den Poll:
b.vandenpoll@falck.com

Our experts are happy to check your specific situation and discuss potential solutions.

Saving lives and assets