

SAFE AND SUSTAINABLE TRANSITION TO PFAS-FREE EXTINGUISHING FOAM

by Hans Huizinga from Kenbri

Fluorinated extinguishing foam has been an indispensable tool for fire services, industrial companies, the military and airports for many years. The high effectiveness in fighting fires was largely due to the presence of per- and polyfluoroalkyl substances (PFAS) in the extinguishing foam. However, it has now become clear that PFAS has harmful long-term effects on humans and the environment. This is why the European Commission has set the goal of reducing all emissions of hazardous substances into water and soil to levels that no longer harm public health and the environment by 2050. This ban applies not only to the emissions of PFAS, but also to their use, including in fluorinated extinguishing foams.



The need to switch to PFAS-free extinguishing foam

Industrial organisations and fire services must therefore switch to PFAS-free extinguishing foam. In recent years, manufacturers have conducted extensive research in conjunction with users of extinguishing foam concentrates to develop PFAS-free extinguishing foam, also known as SFFF or 3F. This research has borne fruit, so that there are already valid alternatives to fluorinated extinguishing foam on the market. Research has even shown that some PFAS-free alternatives outperform extinguishing foam containing PFAS.

This good news has prompted a growing number of organisations to consider making the safe switch to fluorine-free foam. While it appears that the European Commission has set a realistic time frame for this switch, this is in fact not the case. Manufacturers are being confronted with new regulations and import restrictions that directly affect the raw materials needed for PFAS. More and more manufacturers are therefore ceasing to supply extinguishing foam that contains PFAS. In addition, the diminished demand for foam containing PFAS is driving up the price of this foam. This decision is leading users of fluorinated extinguishing foam to realise that their stock of extinguishing foam concentrate cannot be rapidly replenished after use and that they are at risk of losing their 'licence to operate'.

The switch from fluorinated extinguishing foam to PFAS-free extinguishing foam, also known as the foam transition, is raising questions for many industrial companies and fire services. How should they start the transition to PFAS-free extinguishing foam? How long will it take? And what to do with existing stocks of fluorinated extinguishing foam?

— Kenbri: The Fire Fighting Company —

Kenbri, The Fire Fighting Company, is a complete fire prevention and suppression partner and is playing an important role in the switch from fluorinated to PFAS-free extinguishing foam. Kenbri offers support with the foam transition, cleaning of foam extinguishing systems and procurement of fluorine-free extinguishing foam.





It does this in a variety of sectors that use extinguishing foam, such as the offshore, maritime and aviation sectors, fire services and industrial companies in the Netherlands, Belgium and Germany. Companies in the Netherlands, Belgium and Germany.

In order to address the challenges of the foam transition, Kenbri has developed the PFAS Cleaning & Treatment Solutions (PCTS) service package. This service covers the Management of Change process for the foam transition in consultation with the client. It sets out guidelines that ensure a safe transition to fluorine-free extinguishing foam. In-depth analysis is used to assess the suitability of the current extinguishing foam system or vehicle for the switch to PFAS-free extinguishing foam for different fire scenarios.

Graduated transition to PFAS-free extinguishing foam



Once this first step has been completed, the extinguishing systems are cleaned and/or modified. It is important to realise here that it is not enough simply to replace fluorinated with fluorine-free extinguishing foam. The systems will then still be contaminated with PFAS. Organisations must therefore carry out a specific cleaning and sampling procedure for the transition to be safe. It is also vital to process any contaminated flushing agents in an environmentally friendly manner.

Once all the steps from the Management of Change have been completed, validation will take place via an audit of all the phases. This audit ensures that all the phases were carried out correctly, and extinguishing tests are needed to verify that the



extinguishing foam system and PFAS-free extinguishing foam deliver the correct mixing ratio and work as expected.

Assessment guideline — for PFAS cleaning —

An assessment guideline for PFAS cleaning has been published in the Netherlands with effect from December 2024.

This guideline, drawn up in collaboration with a broad project group, focuses on five key aspects of the cleaning process, as well as the storage, transport and processing of waste that

contains PFAS. The guideline provides standardised frameworks that ensure the safety and effectiveness of the cleaning process.

Kenbri: certified and reliable

With effect from January 2025, Kenbri is certified in the Netherlands in accordance with the assessment guideline for PFAS cleaning.

This certification confirms that Kenbri has developed a thorough cleaning process that meets the external guidelines. The process ensures the effective removal of PFAS

and complies with current laws and regulations.

For Kenbri customers, this means that they can rely on an expert and scrupulous service provider for their systems and vehicles.

Conclusion

The switch to PFAS-free extinguishing foam is a necessary and challenging step for many organisations. Kenbri offers the expertise and support needed to make this transition safely and effectively.

With its certified cleaning process and comprehensive services, industrial companies and fire services can rely on a partner who will help them safeguard fire safety and environmental protection.



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