

Phasing Out PFAS-Containing Class B Firefighting Foam (ARRR/AR-AFFF)

Summary

PFAS-free firefighting foam effective against Class B fires is now available in New York State. The PFAS in pre-existing foam products is a concern because they can remain in the environment and in people for many years and cause health effects. The sale of PFAS-containing foam in NYS is now banned. Fire departments can no longer use PFAS-containing foam for training exercises and are strongly encouraged to only use foam products that are certified as being free of intentionally added PFAS for Class B fires. Two such products are currently available in NYS, National Foam Universal Green and Muni Green. Any PFAS-containing foam should be securely stored on-site until it can be safely disposed. For additional guidance see: <https://www.dhSES.ny.gov/system/files/documents/2022/09/foamguidance.pdf>

What are the chemicals of concern in some firefighting foam products?

The chemicals of concern are a family of synthetic chemicals called per- and polyfluoroalkyl substances (PFAS). These have historically been components of firefighting foam products used for controlling Class B fires.

What properties of PFAS have caused concern?

Scientists have determined that several PFAS, including some traditionally added to Class B firefighting foam concentrates, are environmentally persistent, bioaccumulative, and toxic (PBT). This means they remain in the environment and in people for many years and are associated with health effects. PFAS can accumulate in humans, and exposures can be passed on to the fetus as well as to young children through breast milk.

There is evidence from human and animal studies that certain PFAS may reduce antibody responses to vaccines, and may also increase cholesterol levels, change liver enzymes, increase risk of high blood pressure or pre-eclampsia in pregnant women, and increase risk of kidney or testicular cancer.

What is known about the risks of PFAS in firefighting foam is still evolving. There are thousands of PFAS and several of the most persistent and toxic types have been identified in Class B firefighting foam. Others that could potentially be used in foam formulations are also of concern and should be avoided. It may take many years before scientists complete risk assessments for every PFAS that has been used in these foam products.

How have PFAS in firefighting foams caused problems?

PFAS contamination of drinking water is a major public health concern in New York and other states, with Class B foam use associated with the source of exposure. Examples include PFAS drinking water contamination in Newburgh (Stewart Air National Guard Base) and Westhampton (Gabreski Air National Guard Base). These and other cases have caused widespread exposure and require extensive investigation and remediation as a result of foam use during firefighting and training.

Do we know which foam concentrates contain PFAS?

In the past, there has been little information regarding PFAS content in AFFF specifically and products in general. This has begun to change with increased testing by states and other organizations and will greatly improve when PFAS product registration, required first by Maine, followed by California takes

effect. Until very recently, most class B foams were designed to use PFAS. A recent development is the introduction of PFAS-free foam products effective against Class B fires. Unless a class B foam product is certified as being PFAS-free, it should be assumed to contain PFAS. Class A foams generally do not contain PFAS, either now or in the past.

What steps are being taken to address the costs of PFAS contamination due to firefighting foam applications?

To date, federal, state and local governments have been absorbing many of the costs associated with investigating and remediating drinking water contamination from past foam use. New York and several other states have brought lawsuits against the manufacturers and sellers of PFAS-containing firefighting foam products to compensate states for the costs associated with environmental and potential health impacts associated with their use. States are also seeking punitive damages to both punish and deter the use of these products. New York State's complaint names multiple firms including 3M, DuPont/Chemours, Tyco Fire Products LP, Chemguard Inc., Buckeye Fire Equipment Co., National Foam Inc., Kidde-Fenwal Inc., Amerex Corp., and Fire Service Plus Inc. Class B foam products previously received from these companies may be most likely to contain PFAS although we cannot exclude other manufacturers from this concern.

A New York State law signed in December, 2019 (GBS 391-U2) prohibits the use of foams with intentionally added PFAS chemicals for training purposes. Further, In March 2022, a provision went into effect that prohibits the sale and distribution of foam products containing intentionally added PFAS. That law does not prohibit the use of those foams, and those products can still be used on Class B fires when required to protect lives and property. The law also envisions a manufacturer take-back program for those foam products.

What steps can be taken now to reduce PFAS releases from firefighting?

State Fire has tested two PFAS-free foams and found them to be effective for fighting Class B fires. These products, National Foam Universal Green and Muni Green, are GreenScreen Silver certified as being free of intentionally added PFAS chemicals. Fire departments are encouraged to use these PFAS-free certified products where Class B foams are needed. Replaced PFAS-containing foams should be securely stored onsite until they can be properly transferred back to a manufacturer through a takeback program or other appropriate option. If onsite storage is not an option, the preferred method of disposal is solidification and disposal at an authorized landfill.

We are requesting that you submit an inventory of your PFAS-containing Class B foam stocks to the NYSDEC at: <https://arcg.is/0ueKi50>). All products that are not GreenScreen certified as being PFAS free should be included.

The accompanying bulletin from New York State Fire Prevention and Control provides additional recommendations to fire companies.

Questions?

More information about PFAS and health is found at www.health.ny.gov/chemicalsandhealth and at <https://www.atsdr.cdc.gov/pfas/health-effects/index.html> for more information.

For questions on the proper handling of PFAS-containing foam products can be directed to derweb@dec.ny.gov.