

Wisconsin DNR Fire Fighting Foam
1-29-20
Forestry Equipment R&D Center

Wildland fires fall into Class A. For this reason, WDNR uses only foams designed to be most effective on Class A fires. The primary additive that makes foam work is called a surfactant. Surfactants function by reducing the surface tension of water so that it will cover and penetrate porous materials (such as wood) more effectively. The surfactant used in Class A foam is often used in shampoo and other household cleaning products. As it is essentially soap, it is readily biodegradable.

Class B fires require a foam that creates a film between the fuel and the air, sealing the surface and preventing the escape and ignition of flammable vapors. These foam types are commonly referred to as AFFF (Aqueous Film-Forming Foam Concentrates). They combine fluorinated and hydrocarbon-surfactant technologies to provide superior fire and vapor suppression for Class B fires. Fluorinated surfactants have included Per- and polyfluoroalkyl substances (PFAS), a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other additives.

When purchasing Class A foam, the DNR requires that it meets the U.S. Forest Service (USFS) specification 5100-307a and is on the USFS Qualified Products List (QPL). The USFS has researched files back to the 1980s and NO Class A foams on the Qualified Products List have EVER included PFAS ingredients.