Quick Skill-Foam Application

Fireade2000 is applied to ordinary Class A combustibles at the rate of .25% (99¾ parts water ¼ part foam). This finished foam reduces the surface tension of water allowing it to penetrate more rapidly into burning materials. The result is less fire and water damage by allowing faster extinguishment. Foam can be applied as a wetting agent with standard fog or smooth bore nozzles.

Fireade2000 is applied to hydrocarbon spills or fires at a rate of 3% and at 6% for polar solvents (the rate can be increased to achieve the desired affect).

When an appreciable blanket of foam is required, the *"TFT Foam Jet"* (attached to the 1½" TFT Mid-Matic fog nozzle) provides the air aspiration needed for a good blanket. When the nozzle is set in the *straight stream* position, less air is aspirated into the solution resulting in a thinner blanket of foam, but allowing a farther reach. Conversely, when the fog nozzle is set to the *fog* position, less distance is achieved, but a thicker blanket of finished foam is produced.

ARFF apparatus are equipped with 3% AFFF suitable for hydrocarbon fires/spills. PBCFR ARFF apparatus are available to respond to large-scale hydrocarbon incidents throughout the County if needed.

Most departments do not stock alcohol resistant foam for large-scale polar solvent incidents (common polar solvents are Ethanol, E-10, E-85, E-95, Acetone, Alcohol, Racing Fuels, Methanol, and some Racing Fuels).

Depending on the apparatus, size of the on-board foam cell, number of 5-gallon foam buckets carried, apparatus can carry between 20-30 gallons of foam concentrate.

NFPA recommends the following application rates for applying foam with a minimum run time of 15 minutes:

Hydrocarbons: 0 .1 gpm per square foot (foam solution)

Polar Solvents: 0.2 gpm per square foot (foam solution)

Apparatus have 3 different types of "on-board" foam systems; the chart below shows the maximum gpm and the corresponding percentage for each type:

Foam Concentrate	Hale Model 3.3	Hale Model 5.0	Williams ATP
3%	110 gpm	167 gpm	1500 gpm
6%	55 gpm	83 gpm	750 gpm

Hydrocarbon Example 3%:

An area of approximately 44' x 25' (1,100 sq. ft.) of diesel fuel is burning.

0.1 x 1,100 = 110 gpm of foam solution required/per minute.

.03 x 110 = 3.3 gallons of concentrate needed/per minute.

Per NFPA, 3.3 x 15 = 49.5 gallons of foam concentrate is needed for 15 minutes of flow!

Polar Solvent Example 6%:

E85 (Ethanol) is leaking from a fuel tank (un-ignited) and covers an area 25' x 11' (275 sq. ft.).

0.2 x 275 = 55 gpm of foam solution required/per minute.

.06 x 55 = 3.3 gallons of concentrate needed/per minute.

Per NFPA, 3.3 x 15 = 49.5 gallons of foam concentrate is needed for 15 minutes of flow!

The portable 95-gpm-foam eductor carried on most apparatus is capable of delivering ¼%, ½%, 1%, 3%, 6% foam solutions. The eductor requires an inlet pressure of 200 psi to maintain the venturi that draws the concentrate out of the foam bucket. The nozzle should not be placed farther than 300' from the eductor; otherwise the required backpressure interferes with the venturi. If enough foam concentrate is available, the eductor can extinguish up to a 950 sq. ft hydrocarbon fire and a 475 sq. ft. polar solvent fire; each flowing 2.85 and 5.7 gallons respectively of foam concentrate per minute.

Batch mixing foam is a method of adding the desired amount of foam concentrate directly to the booster tank on an apparatus. Batch mixing will produce foam from every discharge on the apparatus including master stream devices. For example, let's say we were operating on a small brush fire and wanted to deliver Fireade2000 as a wetting agent. We would need to add almost 2-gallons of foam concentrate into a 750-gallon booster tank. To reduce sudsing, add the concentrate to a near full tank of water. Always completely flush the tank, pump and discharges after the operation, and never pre-mix foam concentrate in the tank until you are ready to apply the foam.