

The Effectiveness of Class A Foam

*By Deputy Chief Sydney Henry, Jr.
Elmsford Fire Department*

In July 2007, the Elmsford (New York) Fire Department converted all of its onboard foam systems from Class B foam to Class A foam; and issued a Department SOP that Class A foam lines will be the first lines stretched at most fires, unless otherwise directed by an officer.

Engine Company foam lines are 2 inch, pumped at 200 GPM, Class A foam set at 0.5%, and equipped with automatic gallonage combination nozzles.

Class B foam is still carried on our apparatus in 5 gallon containers for use with portable educators.

This conversion was done for the following reasons:

- All of our onboard 30 gallon foam systems were equipped with Class B foam, which was rarely used and regularly caused system maintenance problems.
- A neighboring department reported remarkable success with Class A foam on vehicle and structure fires.
- The added expense was not an issue, because of the very small percentages (0.5 to 1.0 percent) are needed to be effective.
- The department did extensive research, testing, and training to validate its implementation.

Since the above mentioned conversion, the following positive results have been observed:

- The use of Class A foam at 0.5% on vehicle, dumpster, brush and structure fires has proven to be very effective. These fires are extinguished much more quickly, due to the foam's penetrating and cooling properties; using much less water, with no resulting rekindles.
- Quicker knockdowns with no rekindles greatly reduce firefighter stress and improve firefighter safety.
- Recently, heavy fire conditions at a commercial structure and an apartment house fire, Class A foam proved most impressive. At both fires, the first line stretched (2 inch Class A foam) darkened both fires before the pump operator switched from tank to hydrant water.
- Our 2 ½ gallon pressurized water extinguishers have been supplemented with 8 ounces of Class A foam.
- Class A foam at 1.0% has been found to be most effective for exposure protection.

Conclusion: Our current apparatus are only equipped with one Class A foam discharge. Future apparatus will be designed with multiple foam discharges.

From our experience there are no downsides to using Class A foam in most situations, including the often cited criticism is that it is too expensive. At 0.5% the foam is not used in great quantities: *"We are only "topping off" our foam tanks after every three or four uses."*

The firefighter safety and efficiency benefits far outweigh for costs of approximately \$72 per five gallon container.