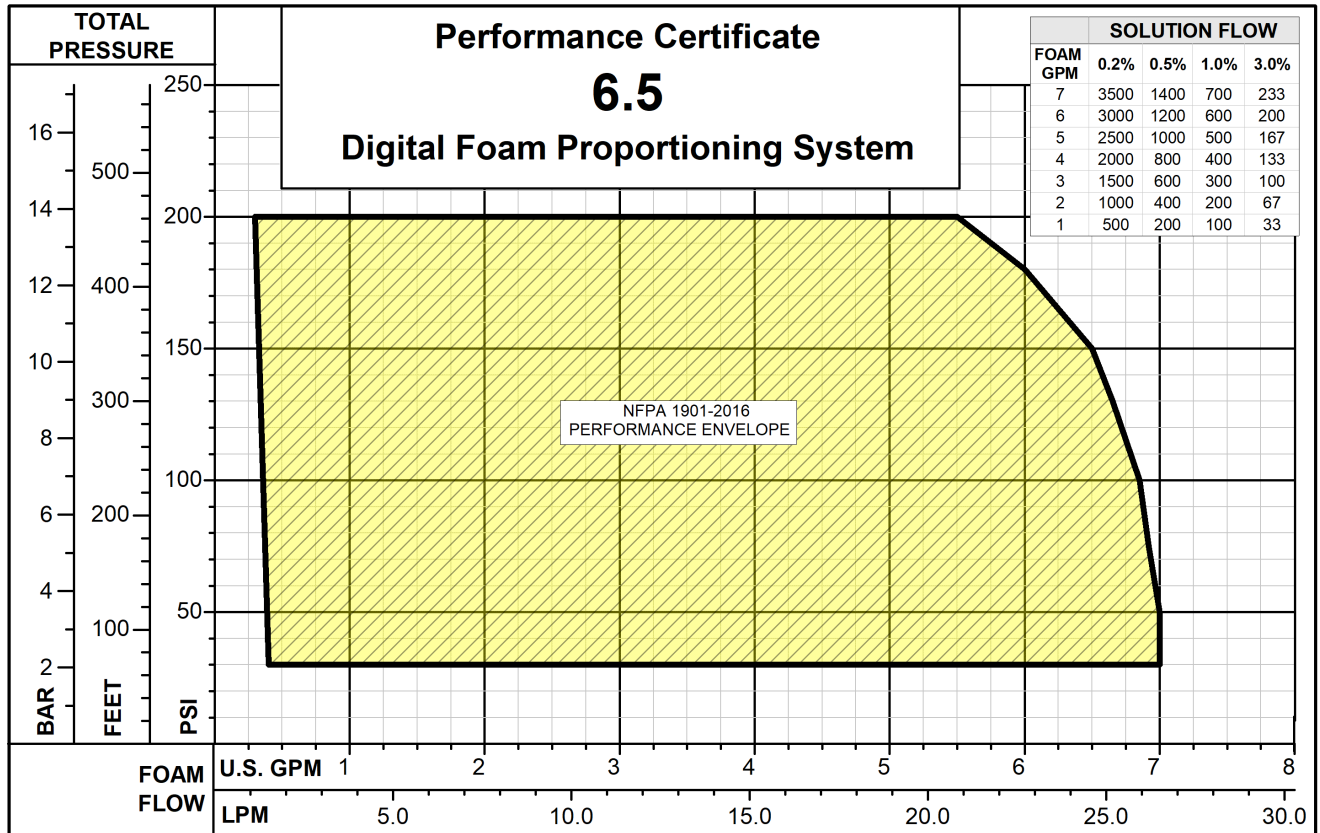




SmartFOAM/FoamLogix

NFPA Performance Curve



NFPA 1901-2016 Edition 20.10.1.1 Type Test Data

WATER FLOW	WATER PRESSURE	FOAM FLOW	FOAM %
40 GPM	30 PSI	0.4 GPM	1.0
2750 GPM	200 PSI	5.5 GPM	0.2
30 GPM	200 PSI	0.3 GPM	1.0
1400 GPM	30 PSI	7.0 GPM	0.5
800 GPM	125 PSI	4.0 GPM	0.5

MAX VISCOSITY	5000 cps
MIN VISCOSITY	1 cps

Caution: Viscosity is not the only characteristic to consider when choosing compatible foam concentrates.

Refer to the Hale approved concentrate list at www.HaleProducts.com

The SmartFOAM/FoamLogix Foam Proportioning System has been type tested for accuracy in accordance with the 2016 edition of NFPA 1901. In order to test the system performance as installed, one of the following procedures can be used. When testing foam accuracy, it is best to use foam concentrate; water is not recommended. If it is not practical to use foam concentrate then an eco-friendly anti-freeze or food grade mineral oil should be used.



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Test the foam proportioning system at the following test points:

- Minimum water flow, minimum water pressure, and minimum foam percentage.
- Maximum water flow, maximum water pressure, and maximum foam percentage.
- Mid-range water flow, 125 PSI water pressure, and 0.5% foam.

Example test points (for reference only). Note: actual test points may be different and should reflect customer requirements.

WATER FLOW	WATER PRESSURE	FOAM %
40 GPM	30 PSI	1.0
180 GPM	200 PSI	3.0
800 GPM	125 PSI	0.5

Test method A: Measure foam concentrate pump output directly.

The SmartFOAM/FoamLogix Foam Proportioning System allows the direct measurement of foam pump output. Turn the bypass valve open to bypass position to direct foam through the calibration hose and into a calibrated 5-15 gallon container.

Operate at a fixed percentage and flow rate and capture the output of the foam pump into the container. Use a stopwatch to determine the rate. Calculate the rate for each desired test point by multiplying the flow rate of water by the foam percentage to find the desired foam concentrate flow. Repeat this process for each desired test point.

Test method B: Determine foam percentage by use of a refractometer.

The refractometer is a comparative process and requires known samples of pre-mix foam solution. A sample is prepared at the target foam percentage and at points richer and leaner than the target foam percentage. Checking each sample in the refractometer, a curve is plotted as a calibration curve for that foam solution and device.

Run the foam system and capture a foam sample. Determine the foam percentage by reading the foam sample and referencing the plotted calibration curve. Repeat this process for each test point.