

TRANSITIONING TO FLUORINE FREE FOAM

DATA SHEET

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THE PROBLEM

As a result of continuing global concern on protection of the environment, several Australian States have introduced legislation that requires the phaseout of fluorinated fire fighting foam concentrates. These foam concentrates are commonly known as AFFF or FFFP. The transition to Fluorine Free Foam (F3) is much more complex than simply draining the foam storage tank of one foam concentrate and pouring in a F3 foam concentrate. Every fixed foam fire suppression system will require engineering changes to ensure that the level of fire protection is not diminished.



All F3 foams have different physical and chemical characteristics to AFFF's and two of the major differences is that it takes more F3 foam and a higher application rate to extinguish a fire than AFFF. The major consequences of this to a fire protection system are:

1. Larger foam storage tanks will be required to store the larger quantity of F3 foam
2. The foam concentrate proportioning device will need to be increased in size to cope with the higher flow rate required for F3 foam
3. Foam distribution pipework will need to be increased in size to cope with the higher flow rate
4. Additional foam discharge nozzles/monitors may be required to meet the higher application rates
5. Foam concentrate pumps will need to be checked to ensure that they can deliver the higher flow rates.

All these aspects need to be checked and modified as necessary to ensure that the fire protection system operates as originally designed. It needs to be remembered that fixed fire fighting foam systems have a finite quantity of foam concentrate and if the fire is not extinguished before the foam storage tank is depleted, the fire will then develop out of control.

THE SOLUTION

Fire protection technologies are a leading supplier of foam fire protection systems throughout Australia, New Zealand and South East Asia and are ideally placed to examine existing foam protection systems and advise on what needs to be done to transition to Fluorine Free foam. Our specialist engineers can visit site free of charge and provide a realistic engineered solution together with costs of equipment and labour required.



FLUORINE FREE FOAM CONCENTRATES

Fomtec's range of "Enviro" Fluorine Free Foam Concentrates are multi-purpose, alcohol resistant, and totally free from fluorinated surfactants and polymers. The foaming characteristics of the "Enviro" range allows the foam to rapidly spread across the burning liquid and get control of the fire. The "Enviro" foams have been designed to work effectively on both hydrocarbon and polar fires. When applied on polar solvents a polymeric membrane is formed and makes it possible for the foam blanket to extinguish the fire effectively.



FOAM CONCENTRATE PROPORTIONING DEVICES

Fire Protection Technologies, have a large range of foam concentrate proportioning devices including in line inductors, bladder tanks and the FireDos water driven turbine that requires no external energy to operate. The proportion device must be carefully selected to match the system flow rate and pressure.



FOAM DELIVERY DEVICES

Aeration of fluorine free foam is critical to successful fire extinguishing. Foam/water monitors, aspirating spray nozzles, foam pourers and the like are the foam making devices that aerate the foam/water mixture evenly to ensure a uniform blanket of foam is spread over the surface of the fire. We also have the ACAF range of Compressed Air Foam Systems, or CAFS which an emerging technology and dramatically increases the performance of F3 foams.

