

## Foam Drum Storage Guide

Maintenance of protein foam stock in 200 litre polythene drums



Angus Fire's 200 litre polythene foam drums are fitted with a venting bung assembly that allows equalisation of pressure between the container head space and the external atmosphere. It is recommended to decant the foam concentrate into long term storage containers. However the Angus Fire shipping containers can be used as long term storage containers, if certain routine checks are carried out to ensure their continued suitability.

Temperature changes in transit and contamination of the vented cap assembly during handling may result in slight pressurisation of the polythene drum. A simple field maintenance routine, as described below, may be used to prevent stress cracking of drums that may be as a result of positive or negative pressure.

The vented bung contains a permeable membrane which is protected against splashing during movement or transport, by a polythene shroud. The assembly is illustrated below.

In the below photograph showing the underside of the vented bung assembly, the protective shroud (coloured yellow) that covers the porous membrane can be seen.



The shroud has a perforation approximately 1 millimetre in diameter – this can get blocked with dried liquid



In the above photograph, the protective shroud (on the left) has been disassembled from the porous membrane element to show the three parts of the vented bung assembly.

## Storage and Testing

Angus Fire offers a range of superior quality foam concentrates that are specially formulated to ensure exceptional storage stability as well as firefighting performance.

A shelf-life of at least ten years can be expected if stored properly according to these recommendations and this figure is based on laboratory-based accelerated ageing tests and history of manufacture.

However, to ensure satisfactory performance they should be sampled at least annually as recommended in NFPA 11, (2010). Section 12.6 also states that "samples of concentrate shall be sent to the manufacturer or qualified authority for quality condition testing."

At least annually an inspection shall be made of foam concentrates and their tanks or storage containers for evidence of excessive sludging or deterioration.

The Angus Fire Foam Testing Service is a qualified laboratory and will perform such tests on any foam concentrates or foam premix solutions as required.



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Before starting, visually examine the drum – are the sides 'ballooned' out or 'pinched in' (this effect is known as 'panelling'). Any of these symptoms suggests that there is a slight positive or negative pressure in the container, Using pliers or some other suitable tool, remove the tamper-evident seal.



With the tamper-evident seal removed, unscrew the bung in an anti-clockwise direction. During its removal watch out for any slight release of gas pressure. The presence of a slight pressure or vacuum in the container or / and or an obvious blockage of the hole in the plastic shroud indicates that the venting bung assembly is not working as it should do to allow the container contents to 'breathe'.



If you suspect that the venting bung assembly is not working then you should replace the venting bung with a new one and then fit a new tamper-evident seal to the filling neck.

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