

# ACTEGA Kelstar Technical Bulletin

## Foaming

### Fount Circulators

There are several brands of fountain solution chillers / circulators available today and all have some ability to generate foam in the fountain solution. The usual cause is the return pump which pulls the fountain solution back from the trays to unit. If the pump is set too high, air will be sucked into the lines from the stand pipes in the trays. When these air pockets hit the pump the air is dispersed into foam.

•**How to Determine Pump Speed** – Look and listen at the lines from the trays back to the circulator. If you hear loud sucking noises and see lots of air in the lines, the pump speed is too high. Turn the pump down or restrict the hoses to reduce flow.

•**What is Normal?** – Foam which breaks down quickly is quite normal in the circulator. The foam will form, but the bubbles are breaking fast enough to prevent more than an inch or two of head on top of the circulator. This condition will never cause fountain solution to come out onto the floor.

### Circulator Resembles a Bubble Bath

This situation causes problems. The stable foam can continue to build, eventually going over the top or getting into the trays to cause a disruption in dampening.

•**Defoamers** – Spray or add an ounce or two to each circulator to knock down the foam. These work ok and must be used occasionally to control the foam, but do not address the real issue.

•**Surface Active (Wetting) Agents Cause Foam**  
By reducing the surface tension, foam can be stabilized. Foaming stabilizers are used in hand dish soap but not in laundry powders. Most surfactants for printing have minimal foam stability.

### Mechanical vs. Chemical Foam

There is a simple test you can perform on press. Fill up an empty pint water bottle half way with fresh press ready fount. Shake strongly and look at the foam. It should be no more than ½ to 1 inch high and break down in 10 seconds. This indicates that any foam which forms will not build and cause a problem. If there is a lot of stable foam it is being caused by the fount or alcohol replacement and you should discuss with the supplier. If the foam broke but there are still problems, it is caused by the mechanical agitation and you need to slow the pumping.

### Foam Becomes a Problem Mid Week

The fresh solution does not cause a problem, but after a few shifts, foam starts to build up. The solution is to pick up a foamy contaminant like plate gum, pre bake conditioner or other press side additive. The fountain solution itself did not foam but cannot overcome the contaminant. Try to identify the culprit by adding a small amount of the possible sources to bottles of fresh press ready solution. When you find the source, try to reduce or eliminate its use.

### We Cannot Eliminate the Source

- Use a defoamer on a regular basis
- Dump the circulator when contaminated and foaming
- Switch to a stronger defoaming alcohol replacement.

Defoamers are oily and if used in excess will cause floating oil in your circulator. They are not very soluble in one step founts so these often have limited defoaming. The best solution is cleanliness and switching to a strong defoaming alcohol replacement.

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