

## Fog Information For Nervous Actors

Please note: this information is true for Look Solutions fog and haze products but may not necessarily be correct for other brands.

A fog machine takes fog fluid and converts it to an aerosol. What comes out of the machine is tiny droplets of fog fluid. Some people incorrectly believe that, since a fog machine is hot, it is burning the fluid to make smoke. What it actually does is heat the fluid to the point where it turns to gas, and then when the gas is expelled from the machine and hits the ambient air it immediately condenses into tiny droplets.

Our fog fluid is made from water and glycol. It is actually bottled by a pharmaceutical chemical company in Germany, so we are convinced there are no byproducts in the fog fluid -- it is pure water and pure glycol.

The glycols we use have been around for decades and there is a vast amount of data available on them. They are used as ingredients in food and makeup as well as many industrial applications. It has been determined that the vapor from our glycols is safe to breathe in the following concentrations\*:

Long term exposure: 10 mg/m<sup>3</sup>

Short term (peak) exposure: 40 mg/m<sup>3</sup>

Please note that 40mg/m<sup>3</sup> constitutes very thick, vision obscuring fog. The amounts used for stage productions are usually well below the above limits.

Exposure to glycol does have one effect on human health, although it is not a dangerous one. Glycol is hygroscopic, meaning it attracts and absorbs water. So actors breathing fog for extended periods may experience a dry mouth and dry eyes, but this is easily remedied by simply drinking water.

In rare cases somebody will have a heightened sensitivity to glycol and may experience itchy, watery eyes and irritated sinuses. This is very unusual, and when it does occur it will be fairly obvious to the person that their body does not like theatrical fog. This person should then avoid it, although there will be no permanent harmful effects, only temporary discomfort.

One final point for you to consider is that Actors Equity Association spent quite a bit of time and money in the 1990s, examining this issue to determine whether it was putting their members at risk. Their initial reaction was to ban fog, but after researching and studying the facts they determined that problems being attributed to fog were actually caused by other factors, for example sharing a dressing room with somebody who has a cold.

*This article was written by Nathan Kahn, President of Look Solutions USA, Ltd.*

\* See ANSI Standard E1.5 2009 available free at:

[http://tsp.plasa.org/tsp/documents/docs/E1-5\\_2009.pdf](http://tsp.plasa.org/tsp/documents/docs/E1-5_2009.pdf)