

March 2004

Nitrogen Can Kill

We had a member company that recently experienced a situation involving a liquid nitrogen dewar. The driver was delivering a 180 liter liquid nitrogen dewar to a customer site. He had to take the dewar up an elevator to get to the customer delivery point. In route, the elevator stalled and the driver was stranded in the elevator with the full dewar for 35 to 45 minutes until the elevator was restored to service.

Fortunately, nothing happened. But, what if the relief devices were to open and rapidly release the nitrogen in the small space of the elevator? The driver would be in serious jeopardy if a quick escape were not possible. The elevator would quickly fill with nitrogen. Since nitrogen is largely inert and acts as a simple asphyxiant, it would dilute the concentration of oxygen in the air below levels necessary to support life. At low-oxygen concentrations, unconsciousness and death may occur in seconds without warning.

With this kind of potential, it is recommended that drivers or other personnel do not ride in elevators with any kind of liquid can. Always use a freight or service elevator, if available. Take manual control of the elevator so other personnel cannot get on the elevator at other floors. The liquid product should travel by itself and the driver should take the stairs or another elevator to the floor where the product is to be delivered. It is recommended that people and liquid cans should not ride in the same elevator.

I suggest that you talk to your drivers to see if you have similar situations. If you do, I encourage you to meet with your customers and review the hazards associated with nitrogen and work out arrangements to avoid personnel and liquid cans in the same elevator.

Important:

This information is offered by the Gases and Welding Distributors Association and your local distributor as general guidance only and may not explain all relevant safety precautions or hazards.