

**Independent & Cost-Effective Gas Safety Solutions**

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1. Welcome to the January 2006 edition of our Client Update. Firstly, I would like to take this opportunity to wish all of our friends and clients a [belated] happy new year.

2. I thought that the following photograph and description of a liquid nitrogen burn would be of interest as it would also serve to underscore the requirements for personal protective equipment during decanting operations and the importance of appropriate first aid procedures.

The incident occurred in May 2003 at the School of Physics at UNSW, Australia.

According to their report, the injury was caused by liquid nitrogen getting caught inside the glove of the person concerned; there was 'severe' splashing and the glove was not inside the sleeve.



As a result of these injuries, the injured party was prevented from using their right hand for 10 days. Notably, it was also reported that they remembered no immediate sense of pain or cold but that they could recall a sensation numbness.

The duration of exposure was estimated at 30 seconds; this was compounded by turning the control valve in the wrong direction whilst trying to turn off the supply.

**PLEASE ENSURE THAT:**

1. All persons involved in liquid nitrogen handling and use have received appropriate training - this should include how to operate the equipment and what to do if something goes wrong (first aid procedures, etc.).
2. All such persons are issued with appropriate PPE including gloves.
3. Remember that gauntlet style gloves are not recommended.



3. Our new catalogue is now available...

It's taken some time but, finally, it's arrived - the Gas Safety UK 'Gas Regulators and Equipment Catalogue'!

Quite a lot of these were mailed out during the first two weeks of January, if you haven't received your copy or if you would like to be sent one then please feel free to request one by e-mail to: [sales@bj-industries.co.uk](mailto:sales@bj-industries.co.uk) or by telephoning free on: 0800 783 6399

4. Not surprisingly then, with reference to point 3 above, we have committed ourselves to not making any price increases on our gas safety products during 2006.

So, if you are planning to purchase new cylinder regulators, flashback arrestors, cryogenic gloves, etc, etc during 2006 then please get in touch and we will be happy to quote - you may qualify for a discount.

5. Returning to the subject of cryogenic safety, the photograph below shows what can happen during quenching of liquid helium. This may be of interest if you are looking at your worst case scenario oxygen depletion calculations etc. Here the discharge of gas is extremely rapid and can result in the laboratory becoming very foggy very quickly!



Hence, based on the above, it may not always seem to be so far fetched to assume that liquid to gas discharge occurs almost instantaneously.

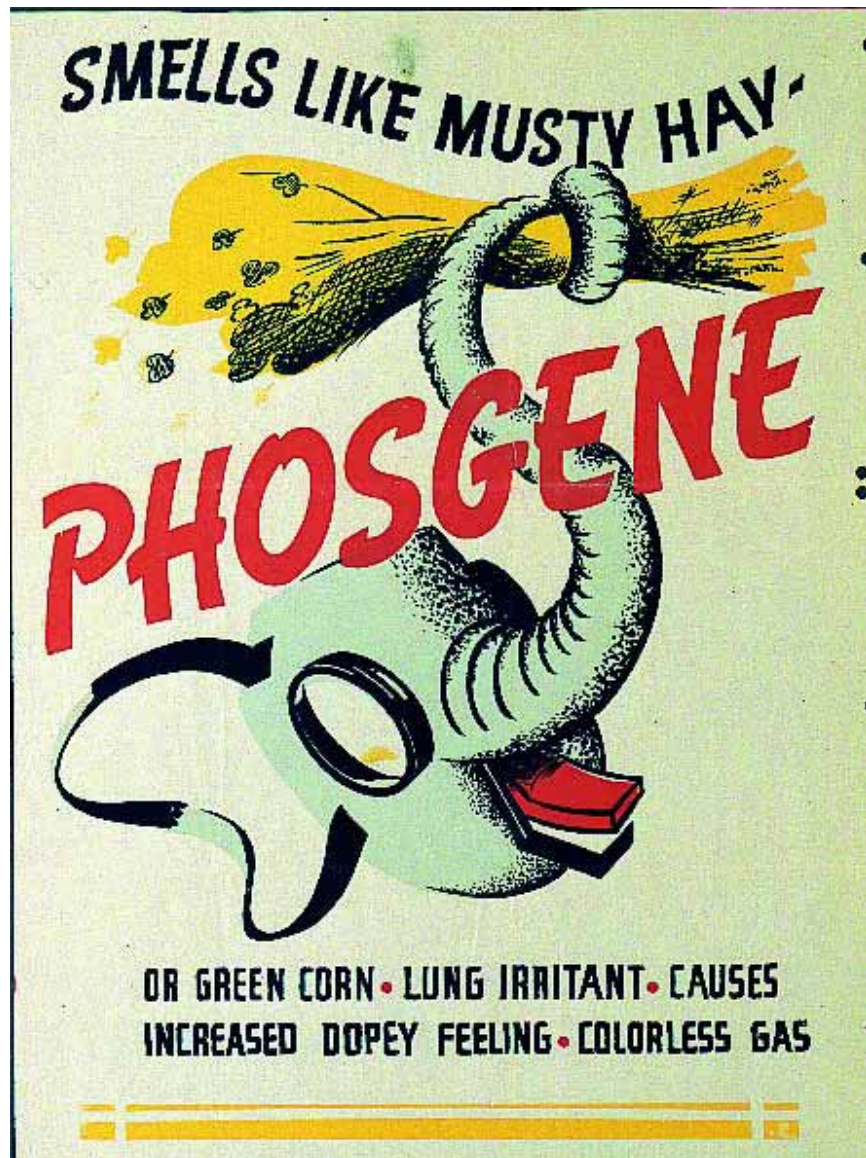
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6. Here's one from the archives.

Charming, quaint - possibly...

It almost seems less dangerous when presented like this; 'lung irritant', 'causes dopey feeling'!?

Phosgene (or carbonyl chloride) is classified as very toxic and corrosive and in terms of acute toxicity the LC50/1 hr\* is only 5 ppm (for comparison the LC50/1 hr for chlorine is almost 60 times higher at 293 ppm).



(\*LC50/1 hr = Lethal concentration for 50% of the experimental population over a duration of 1 hour exposure)

For more information on any of the subjects in this months Update, please contact: David Bayliss (e-mail: david@bj-industries.co.uk, telephone: 01909 501771)

Gas Safety UK supply the following services/goods:

1. Safety training for those who use, handle or store cylinder gases or cryogenic liquid gases like liquid nitrogen.
2. A comprehensive range of gas regulators and associated safety devices.
3. The installation of gas cylinder manifolds and pipeline systems.
4. The testing & inspection of pressure regulators, manifolds (including the safety devices) and pipelines.
5. The planned or remedial maintenance of gas cylinder manifolds and pipeline systems.
6. Consultancy, reporting and site safety survey services relating to the above areas.

**Independent & Cost-Effective**

**Gas Safety Solution Provider**



4-wheeled, cylinder [Cardiff] trolley (Part: 99-112)

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