

The University of Reading Safety Office - Safety Note 12



Risk assessments for storing gas cylinders in halls

When CO₂ cylinders are brought inside buildings the room must be adequately naturally or artificially ventilated, and cylinders should be:

- checked for leakage after delivery, before storage, and before use using the appropriate leak test solution (obtain advice from the supplier - bubbling will evidence any leaks);
- checked for leakage, say weekly, when connected to the system;
- kept away from ignition sources; and
- stored at temperatures below 45°C with valve guards in place and the cylinder valve closed when not in use.

In exceptional circumstances cylinders may need to be stored in unventilated rooms. Such rooms would be classed as confined spaces and specific risk assessments would be required. This arrangement should be avoided if possible. Carbon dioxide monitoring (using a carbon dioxide detector and alarm system) would be required in poorly ventilated areas - advice should be sought from the CO₂ supplier. Regular checks would need to be made to ensure the system is working. Risk assessments should include, safe working procedures, action to be taken in an emergency, first aid, etc.

4 EMERGENCY ACTION

In the event of a leak, the area should be evacuated and well ventilated. If the cylinder has a bursting disc which may give a sudden release of gas, then the area must be cleared and ventilated. Remember:

- do not enter a confined space unless the oxygen and carbon dioxide levels are satisfactory; and
- then - and only then - check that the cylinder valve is closed.

In the event of fire:

- vacate area, call fire brigade and follow hall/area procedures;
- inform emergency services of the presence of cylinders and the possibility of bursting discs; and