

SUREMIX SAFETY

Gas cylinders are filled at high pressure and are potentially dangerous and must be handled and stored the correct way.

Manual Handling Regulations are set out to protect you and your employees. This includes information on safety of gas storage areas, gas leaks, storage of cylinders, and the safe handling of gas cylinders.

Afrox Sureserve's dedicated Sales Service Representatives are fully trained in manual handling procedures. They will deliver cylinders to the point of use and can offer advice and guidance on all aspects of safe management of dispensing gases and equipment in your outlet, including safe cylinder handling. Furthermore, your local Sales Service Representative is trained to check for gas leaks and advise on:

- OSH Act - Vessel under pressure act
- SABS - Confined space

1. Safety of Gas Storage Areas

The area where cylinders are stored, handled or connected should be checked regularly to make sure that it provides a safe working environment.

Cylinder Storage Area	
Always	Never
1. Restrict entry to the area, only allowing trained persons to enter and undertake necessary work	1. Stand cylinders on uneven floors. The cylinder may fall causing injury or damage
2. Display appropriate warning signs and safety procedures	2. Obstruct access into or out of the storage area which could prevent escape in an emergency
3. Ensure the storage area is adequately ventilated	3. Allow untrained / unauthorised persons to enter the storage area
4. Clean up spillage's' immediately to prevent slipping hazards	
5. Ensure the cellar has adequate lighting	
6. Secure cylinders safely whether in use or not	

2. Gas Leaks

Carbon Dioxide:

- Contains no oxygen and cannot sustain life
- Is toxic
- Displaces air from the floor upwards

You should check dispensing systems every day for leaks or faults. If you know or suspect that a leak has occurred, report it and take action immediately.

Small Gas Leaks
These may occur if, for example, a nut is not tightened or a gas seal is faulty.
1. Ventilate the room or storage area by opening all doors and windows
2. Let someone else know that you are about to go into the room, why you are going in there and how long you anticipate this will take you
3. Other people should be prevented from entering the area until your return
4. Turn and close off the gas mixture discharge valve
5. Isolate the problem if possible by switching off at the individual secondary regulator or checking connections if the leak is upstream of the secondary regulators
6. Spray the cellar floor with water

Major Gas Leaks
These may be caused by plant failure or a pipe or bursting disc rupture. A sudden release of gas can knock the cylinder over and make a loud noise. In these circumstances you should not touch the cylinder.
1. Turn off the gas supply
2. Inform all staff and evacuate the area
3. Call for assistance
4. Do not let anyone go into the affected area under any circumstances until you are sure it is safe to do so (emergency service personnel may enter if using self-contained breathing apparatus)
5. Open outside doors and windows to ventilate the area
6. Close all doors opening into passages leading to any place where accumulation of gas could be dangerous
7. Leave the refrigeration switched on - the fans will help to disperse the gas
8. Do not touch frozen gas cylinders without wearing protective gloves

3. Storage of Cylinders

Storing Cylinders in Use	
Always	Never
1. Secure (chain) cylinders in an upright position	1. Touch a frosted cylinder. Frosting is usually indicative of rapid release of gas
2. Connect to a primary regulator, either directly or through a high-pressure hose	2. Try to unscrew the valve fittings on the cylinder
3. Keep away from sources of heat	
4. Check the cylinder label before using. Ensure that the correct gas mixture is being connected to the line (All Suremix cylinders are colour coded for easy identification). Link to colour coding	

Storing Cylinders Not in Use	
Always	Never
1. Store and secure the cylinder in an upright position or laid flat and chocked in a safe area	1. Store cylinders where they may come into contact with water
2. Store full cylinders in a separate area away from cylinders in use	2. Store cylinders next to a direct heat source e.g. radiators, coolers etc.
	3. Stack objects in front of cylinders. Reaching over objects to lift cylinders can cause back injury.

4. Safe Handling of Suremix Cylinders

Empty cylinders can be dangerous if they are not stored correctly. It is therefore critical that your employees are instructed to always treat a high-pressure vessel in the correct manner.

General Guidelines for Cylinder Management	
Always	Never
1. Keep cylinder stocks to the necessary minimum for your volume of trade.	1 Fill one gas cylinder from another - this is very dangerous.
2. Only use cylinders filled by a reputable gas supplier who fills and regularly tests cylinders in accordance with current safety regulations	2. Carry gas cylinders in a car or other closed vehicle
3. Have spare washers available to replace worn out ones that may cause leaks at the cylinder connection	3. Connect gas cylinders to any equipment other than the primary regulator or the high-pressure hose (serpentine)
	4. Drop, throw or mishandle cylinders
	5. Use cylinders for anything other than storing and delivering dispensing gas
	6. Oil or lubricate cylinder valves

Generally cylinders are safe, but the mishandling of cylinders can cause serious injury, which is normally avoidable. Training your personnel in the correct handling of cylinders can save time, money and avoid injury.

Safe Handling of Suremix Cylinders	
Always	Never
1. Use protective gloves and footwear when handling cylinders	1. Lift cylinders over 25kg in weight by yourself as this can cause muscle strain or back injury
2. Use suitable equipment such a trolley or mechanical lift for moving large cylinders	2. Lift cylinders above chest height
3. Carry cylinders close to the body	3. Reach for and lift cylinders from behind stacks of crates or kegs, this can cause strain or injury