

Cylinder Storage and Use

- Cylinders must be used and stored in the vertical position with the valve uppermost.
- Cylinders should not be exposed to direct heat i.e. placed in front of fires etc.
- When not in use cylinders should be stored in a secure compound, sited in the open air.
- Handle cylinders with care, they should not be dropped as this could cause damage to the cylinder and the valve.
- Cylinders must not be stored below ground level in basements or cellars. LPG is heavier than air and therefore any leakage of gas will accumulate at low level. Cylinders must not be stored or sited within 3 metres of cellars, drains or excavations.
- Empty cylinders should be segregated within the secured storage compound.
- Wherever possible cylinders and regulators should be sited outside the building and the gas supply taken into the building by fixed pipework.
- Cylinders should be sited so that they are not heated by the equipment and if necessary protected from radiant heat by insulating screens.
- Work areas should be kept clear of any combustible material.
- **Under no circumstances should LPG cylinders be left around the site or buried during site operations.**

Appliances and Equipment

- Heaters should be fixed and preferably of a room sealed type.
- If flueless heaters are used, they must be fitted with an atmospheric sensing device, which will shut the heater down when the carbon dioxide level in the atmosphere reaches a preset level.
- Unflued heaters **MUST NOT** be used in premises, which may be used as sleeping accommodation.
- Permanent ventilation must be provided where unflued appliances such as convector heaters and cookers are used in site huts This is to prevent the build up of combustion products. This is particularly important when the site hut is occupied for long periods e.g. by night watchmen.
- On no account must the outlet grills of convector heaters be obstructed or the heater placed near curtains, facing the wall or have clothes draped over them.
- It is important that all appliances are installed by a Gas Safe™ registered installer and are regularly maintained and serviced. Heating appliances should burn with a steady non-luminous flame without any smell or soot.
- If flexible tubing is used it must conform to BS3212 or BSEN1763 which bear the year and name of manufacturer. All tubing must be examined before use and any damaged tubing replaced.
- The length of hose should not normally exceed 2 metres.
- When lighting an appliance/equipment, please follow the manufactures instructions. Before turning on the gas supply at the cylinder, the equipment valves should be checked to ensure that they are closed.
- If there is any smell of gas from the appliances or equipment after lighting or during use, it should be turned off and the cause investigated.
- No equipment or appliance should be moved whilst alight unless designed to be moved in use.
- After use it is essential that the valve on the equipment and the service valve on the supply line is turned off. If a single item of equipment is connected directly to the cylinder, the cylinder valve should also be turned off.
- When not in use portable equipment should be stored in a secure place to prevent tampering.
- Equipment should be operated at the manufacturer's recommended pressure and only hoses suitable for LPG gas service at that pressure should be used to connect the equipment to the regulator.

Changing Cylinders

- Always check that the valves of replacement cylinders are firmly closed before removing the plastic plug from the outlet connection. **DO NOT use tools on cylinder valves**; they are designed for hand operation only.
- Before connecting any cylinder, check that the bull-nose union on the regulator or the flexible connection is clean and undamaged. These connections have left handed threads and must be tightened with an open jawed spanner.
- Always change cylinders, wherever possible, in the open air and ensure that there are no naked flames in the vicinity of where the cylinder is being changed.
- **DO NOT** open the valve on a cylinder connected to an installation before checking that the taps or valves on the connected appliances are all closed.

Fire Precautions

- Smoking and other sources of ignition including mobile phones and similar electronic devices should be prohibited in all LPG storage areas and suitable prohibition notices should be prominently displayed.
- A sufficient number of dry powder fire extinguishers should be provided in easily accessible locations at all LPG storage areas and where LPG is being used
- The fire brigade should be informed of all bulk LPG storage tanks and storage areas of more than 1000 kg of LPG cylinders.
- Suitable clear access should be provided to all LPG storage areas.

Fire Fighting Measures

- Vacate the area and call the Fire Brigade. Small fires can be attacked with dry powder fire extinguishers.
- If it is safe to do so, close the container valve and allow the fire to burn out. If unable to cut off supply of gas allow it to burn. Keep neighboring cylinders(s) or tanks(s) cool with water spray.
- **Do Not** use water or foam to extinguish LPG fires.
- In a confined space use self contained breathing apparatus.
- Beware of vapour accumulating to form explosive concentrations. Explosive vapours may travel, be ignited at remote locations and flash back. A water spray may be used for vapour dispersal.

Unignited LPG Leaks

- Leaks may be identified by smell, noise or frost at the source
- Suspected leaks may also be detected by soapy water or a gas detector.
- **NEVER SEARCH FOR LEAKS WITH A NAKED FLAME**
- Isolate the leak (in the case of portable or moveable plant, move to a safe area if possible).
- Ventilate the building/area.
- For large leaks, assist dispersal of LPG gas and protect vulnerable plant and areas with water sprays.

Ignited LPG Leaks.

- Cut off or reduce the supply of gas, wherever possible.
- If safe to do so, deflect or move any flame from impinging on vulnerable plant.
- Before attempting to extinguish the flame, assess if the LPG will cause an explosion risk.

Tackling the Incident.

- Carefully assess before any approach.
- Wear the right equipment, including clothing.
- Ensure safe route of access and egress is available.
- Approach any fire or escaping LPG from upwind.
- Avoid coming into contact with the LPG, it can cause severe cold burns and saturate clothing which may subsequently be ignited.
- Any vessel involved in a fire may suddenly rupture. Change in the size of the fire, or noise from the PRV may be an indication. But there may be no warning.
- **IF IN DOUBT DO NOT APPROACH.**

First Aid Measures

- **Eyes:** Immediately flush eyes with plenty of cold water for at least 15 minutes. Hold eyelids apart while flushing to rinse the entire surface of eye and lids with water. Get immediate medical attention.
- **Skin:** In case of cold burns, immediately place affected area in tepid water and keep immersed until circulation returns.
- **Ingested:** No emergency care anticipated, the material is a gas at standard temperature and pressure.
- **Inhalation:** Immediately remove patient to uncontaminated area. Keep warm and at rest. If breathing has stopped or shows signs of failing, commence artificial respiration. Summon immediate medical attention.
- **Severe inhalation over exposure to this product may sensitise the heart to catecholamine induced arrhythmias. Do not administer catecholamines to an over exposed person.**

For further information please consult UKLPG Code of Practice No 24 Part 5 'The Storage and Use of LPG on Construction Sites'

If you require further advice please contact the Technical Help Desk at Tachbrook Park (0845 602 1143)

**CALOR GAS EMERGENCY SERVICE – 0845 7 444999
(ALL CALLS CHARGED AT LOCAL RATE)**

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