

LPG EQUIPMENT SAFETY GUIDELINES FOR END USERS (DOMESTIC COOKING)

The present guidelines are aimed to be used by end-users for their domestic use, mainly cooking. They are not intended to be a fully comprehensive list of all possible safety issues, as anticipated, but they include the main logic of how to avoid or reduce the risk associated with the use of LPG in domestic conditions.

The recommended 5-point safety check:

1. **Regulator:**
Use only regulators with the Safety Mark endorsed by the country norm or ISO 23551-2:2006
Check the regulator to ensure it is not expired, and change the regulator every five years.
2. **Rubber Hose:**
Use only hoses defined by the country norm or ISO 2928:2003 or NF 36-110
Check the rubber hose to ensure its date of usage has not expired; a norm compliant hose bears the expiration date. Change the rubber hose every 5 years.
3. **Hose Clips:**
Check the hose clips to ensure that they are in good working condition and properly secured.
4. **Cylinder:**
Check the LPG cylinder for cracks, especially at welding zones and at the base where the valve is.
5. **Leak Test** Check for gas leaks by applying soap solution (like some dish detergent) on cylinder joints. The appearance of soap bubbles will indicate a leak point.
Do not use an open flame (like matches or lighter) to detect leaks.

When buying your initial LPG cylinder and subsequent refills:

1. Always buy LPG cylinders from a LPG distributor who is authorized and whom you know since he/she bears the responsibility of the cylinder brand.
2. Always check that the cylinder has the genuine valve seal and/or valve cap of the Marketer. The genuine seal/cap should be present and intact, even if the LPG cylinder is delivered to your home.
3. Do not accept the cylinder if the seal/cap is broken or looks tampered/damaged.
4. Refuse any cylinders or valves that have a gas smell since this usually signals that the cylinder is leaking.



5. Ensure the weight of the gas is correctly indicated on the cylinder by seeing the full weight of the refilled cylinder corresponds to the tare¹ weight plus the weight of the gas. Usually the Tare weight + the weight of gas is indicated, painted on the cylinder.
6. Ensure your regulator is of quality, and complying with ISO norm 23551-2:2006. Only buy regulators from authorized LPG distributors.
7. Ensure the regulator is for butane if your LPG is mainly butane, or propane if propane. After few years, the regulator may have to be changed. The regulator avoids overflow of Gas at the burner, and keep the consumption of LPG under control. A bad regulator provokes a higher consumption of gas, and the flame cannot be kept blue.

Storing the LPG refilled Cylinder at home

1. Ask your LPG provider about the LPG content in your country.
 - If the percentage of Propane is more than 50% in kg, it is not recommended to store the cylinder inside the house, in a closed area. It must be stored outside.
 - If the percentage is less than 50% of Propane, and therefore more of Butane, it can be kept indoor, and placed only in an area with windows to provide ventilation in case of smelling of gas.
2. Always store the LPG cylinder in an upright position and away from other combustible and flammable materials. Never place the cylinder horizontal or upside down to avoid gas leakage through the valve, and to enable the normal vaporization inside the cylinder.
3. Do not expose the cylinder to a direct heat of more than 50°C.
4. Select the LPG cylinder storage area with windows you can open to ventilate if it smells gas in the area.
5. Keep the cylinder away from kerosene lamps or kerosene/biomass burning stoves.
6. Where the cylinder is stored, do not smoke or use cellular phones (or any source of static electricity such as devices with a small battery inside) in proximity of the LPG cylinder.
7. If you can afford it, you can use a fire smoke and gas detector to be placed/installed in the kitchen area.

Where to keep your LPG stove

1. If possible never placed the stove on the floor: you can have a better control for safety if the gas stove is placed on levelled, secured surface.
2. Have a clear cooking area with no wooden shelves over stove, avoid any flammable product or items to be in the vicinity (less than 1 meter) of the flame: like wooden shelves, books, curtains, Kerosene bottle, or even gasoline bottles.

¹ Tare, in kg, corresponds to the weight of the empty cylinder, and must be indicated on the cylinder



3. Keep the stove, the regulator, the hose and cylinder out of reach of children.
4. Ensure the hose remain protected from the reach of high temperature food/water or other spills.

Housekeeping your LPG equipment

1. Always keep the LPG valve and the regulator switched off when your gas stove or oven is not in use, especially at night and/or when going away for vacation.
2. Never tamper with your LPG cylinder, never attempt to remove the valve, nor heat the cylinder to accelerate the gas flow.
3. Make sure all parts of the installation are in good condition. If you should find something wrong with any of the parts, contact your distributor immediately and ask for assistance.
4. Never accept a refill of the cylinder from anyone who is not the Marketer-owner of the cylinder. Always exchange an empty cylinder for one refilled by the Marketer.
5. Clean stove surface and burner regularly with regular soap for cleaning dishes and water. Make sure stove and burner are cold before you start cleaning.
6. Conduct regular safety inspections by passing soapy water on the hose and valve. If you see bubbles, take immediately the cylinder to where it was purchased for replacement, before continuing to cook.

In case of a leakage without flame (detected by the smelling of or noise from the leakage)

1. If the cylinder is kept indoor: stop cooking immediately, open the windows to ventilate, shut down any electrical appliance (e.g. radio, fan, air conditioning, light, mobile phone, etc.) and stop smoking to prevent fire ignition.
2. If the leakage cannot be stopped, quickly disconnect the cylinder from the hose and take the cylinder outside.
3. Place the cylinder in an isolated area with a safety “no go area”² around the cylinder, to avoid any ignition of fire. If the safety area is without ignition risk, you can wait until the gas has gone and let the cylinder get empty. The same applies if the leakage is outdoors.
4. When returning the cylinder to where it has been bought, it is important to inform the retailer that the cylinder is dangerous and ask for compensation.
5. In case of emergency the fire brigade/fire department can be called for assistance.
6. In the presence of:
 - a. A POL valve: you can quickly switch off the POL valve to stop the valve leakage.
 - b. A Clip-on valve: you would not be able to stop any valve leakage.

² A « no go area » is an area you are sure nobody will go



In case of a leakage with flame

1. In case of leakage with flame, immediately stop cooking, close down the POL valve and/or the regulator using wet clothes and use water to stop the fire.
2. If the leakage cannot be stopped, quickly disconnect the cylinder and take the cylinder outside, place it in an isolated area with a safety no go area around the cylinder, to avoid any ignition of fire. If the safety area is without ignition risk, you can wait until the gas has gone and let the cylinder get empty.
3. If the fire cannot be stopped, and the cylinder cannot be taken outside even with fire, urgently call the fire brigade/fire department, and ask everyone to exit the house.

During the cooking with LPG

1. Always adjust the size of the flame according of the need of cooking. LPG can also help you cook at a slow speed.
2. Always ensure the flame is blue, not yellow. Yellow/orange color indicates an overflow of gas, an excess of gas. If the flame is yellow/orange, you should clean the burner. If the flame is persistently orange, you should call your gas provider.
3. Never leave a flame or your cooking, unattended, as the flame can extinguish if exposed to an air flow or a cooking overflow. If the flame has extinguished, the gas continues to flow, and the valve is not closed immediately, the risk of fire in the kitchen is high in case of ignition from any source, it is important to ventilate the area before to re-ignite the burner.
4. If a flame went out, switch off the gas stove immediately and open the windows to dilute the gas before switching on the stove again.
5. Do not place flammable or plastic items near the flame of the gas burner.
6. Turn the pan handles away from the flame.

How to save on gas

1. Never let the flame burning and not covered by a pan: prepare/chop food before turning the burner on to save gas
2. Use high flame to get water/soups/stews to boil; once it is boiling turn flame down and continue the cooking.
3. Use lid on pots (will cook faster, saving you time and gas).
4. Put beans/lentils/chickpeas in water overnight/for a few hours, it will save you time and gas.
5. The use of a pressure cooker is highly recommended to save gas.