

Codified Fire Safety Requirements For Use of
“MORE THAN 2 LPG CYLINDERS”

It is responsibility of owner/occupier to comply following codified requirements before actual commencement of the trade activities. Asstt. Commissioner shall ensure that trade activity is commenced only after all approvals (i.e. issuance of compliance certificate from this department and trade license).

1. The entrance, exit, passage shall be kept free from any obstruction.
2. A separate rear/side exit shall be provided for kitchen.
3. A clear passage of at least one meter width shall be kept from entrance of the trade premises to the exit/rear wall of kitchen.
4. Rear side exit of the premise shall be kept open during all the working hours.
5. The entire electric wiring shall be laid as per prevailing Electricity Act & Rules & the compliance certificate to that effect from Govt. Approved electrician / agency shall be submitted along with the application.
6. No combustible storage of any kind shall be done within the radius of one meter from any electric wiring and/or electric installations.
7. Good housekeeping shall be maintained on the premise.
8. A minimum distance of 03 mtrs shall be maintained between an installation & any other building, public place, road ways, etc.. The installations shall be protected from excessive weathering by sun, rain etc. & from tampering by unauthorized persons. A lean to roof with expanded metal on angle iron framework on the sides is considered suitable for this purpose. In any case, adequate ventilation at ground level to outside air shall be provided.
9. Necessary permission shall be obtained from the Owner/Society of the said premises for the installation of L.P.G. Cabin & the authenticity of it shall be verified by A.E.(B&F) of concerned Ward.
10. The position of the cylinders shall facilitate:
 - a. Changing and quick removal of any cylinder in case of necessity, access to cylinder valve connections and regulating devices.
 - b. Cylinders shall be installed upright with the valves uppermost.
 - c. Cylinders shall not be installed or used below ground level, in cellars or basements.
 - d. Cylinders shall not be installed at a place where they may be overheated, for example, close to steam pipes and boilers.
 - e. Cylinders shall not be installed at a place where they are likely to cause an obstruction, to be damaged or to be exposed to conditions likely to affect their safety.
 - f. Cylinders shall be located on a concrete or brick floor, preferably raised in case of outdoor installations.
 - g. In order to prevent the hazardous collection of gas, cylinders shall be placed at least 1 m away from culverts, depressions, or openings leading to below ground level compartment, and drains.
11. The cooking burners of BIS mark shall be restricted to _____ in numbers (Number of burners will be finalized with due inspection on site by the fire officer) and shall be kept on the raised non-combustible platform.
12. The entire gas installation i.e. regulator, other fixtures shall be carried out under the supervision of a qualified engineer from any one of the public utility company confirming to the rules for commercial and industrial use of L.P. gas.
13. Installations on which flexible hose is used shall satisfy the following conditions:

- a. The length of hose shall be kept as short as possible and should normally not exceed 2 metres.
 - b. The appliances connected shall be of portable type and not mounted in a fixed position.
 - c. Flexible hose shall not be extended from one room or verandah or one space to another and therefore shall not be passed through doors, windows, walls, partitions, ceilings, or floors.
 - d. Flexible hose shall be accessible for easy inspection and shall not be connected from view in walls, cupboards, cabinets and other obstructions.
 - e. Flexible hose shall not be used in conditions where ambient temperature exceeds 52°C.
 - f. Flexible hose shall be so installed that it is not twisted, looped or kinked and is not subjected to any external pressure. Periodic inspection to be carried out by the supplier of the gas.
14. Appliances which are rigidly fixed in position shall be connected by means of rigid piping. Appliances which are portable, if connected to rigid piping, shall be connected through flexible or semi-flexible connections.
 15. The two LPG cylinder cabins shall be separated by four meters distance from each other as well as adjoining LPG cylinder cabins.
 16. The open space in front of the L.P.G. cabin shall be maintained free from obstructions.
 17. From the cabin to building line, LPG pipe line shall be laid underground & piping shall be buried to a minimum depth of 1m or covered in a manner so as to protect the piping from physical damage as per NBC Part9, Sec-4, 8.4 & where it is laid above ground it shall be encased in suitable metal pipe of sufficient thickness so as to avoid damage to LPG pipe line due to physical impact, fire etc.
 18. As the location of the LPG cabin is on ground floor where as the kitchens is on upper floor i.e. -----floor, the route of the LPG pipe line shall not pass through escape routes, corridor, staircase etc. & the pipe line shall be suitably protected with clamps so that same should not be affected due to physical damage, flame and source of heat.
 19. Piping :
 - a. Piping shall be free internally & externally of cutting burrs, loose scales, dirt, dust & other foreign matter before the installations is completed.
 - b. It is recommended that, where possible, joints should not be placed beneath ground level in accessible places, confined places (for example, cellars), air or ventilating ducts, space under flooring or lift shafts.
 - c. If joints have to be used in piping beneath ground level in accessible places or confined places, they shall be welded or brazed to minimize the risk of leakage which may lead to hazardous collection of gas.
 - d. Where welded or brazed joints are used, they shall be of adequate mechanical strength and for fire resistance; the material used for welding or brazing shall have a minimum melting point of 540°C.
 - e. Joints other than welded or brazed shall be readily accessible.
 - f. Piping shall be so located or protected so as to avoid extremes of temperature which might give rise to condensation or cracking of the gas.
 - g. Provision shall be made to avoid damage to the piping from its expansion, contraction & vibration & by settlement of the building by which it is carried.
 - h. Piping shall be protected against corrosive atmospheres & materials.
 - i. As far as possible, concealed piping shall be avoided, if concealed piping is used, it shall be protected against inadvertent damage, such as from nails & knocks, by its location, type of material used for sheathing.

- j. Piping shall not be run in or through an air or ventilating duct, chimney, flue or lift shaft.
 - k. Piping up to an outside diameter of 12 mm shall be supported at intervals of about 50 cm by means of pipe saddles or clamps in a way to avoid sagging and shifting. For larger diameter pipes, suitable longer supporting intervals may be used.
 - l. It is recommended that if the pipes are run along the surface of a structure, the supports should be so designed that the joints are sufficiently clear of the surface to permit the use of tools without damage to the surface.
 - m. It is recommended that when installing pipes along the surface of a structure, the installation is done in such a way that moisture is not trapped between surface & the pipeline.
 - n. It is recommended that the piping passing through the walls should be protected by a covering sleeve. It is necessary to pack the space between the piping & the sleeve, a moisture proof material which does not corrode the piping shall be used.
 - o. The distance between gas piping & steam piping, if running parallel shall be at least 150 mm. The gas piping should preferably run below the steam piping.
 - p. The distance between gas piping & electrical wiring in case of non-concealed system shall be at least 60 mm & where necessary; they shall be securely fixed to prevent contact due to movement. The gas piping should run below the electrical wiring.
 - q. Suitable line shut off valves shall be fitted for each appliance or burner.
 - r. A main valve shall be fitted in the piping as near as possible to its point of entry into the building. It shall be enclosed in metal box with a glass frontage.
 - s. It is recommended that the number of fittings used in an installation should be kept to a minimum in order to reduce the risk of gas leakage. As far as possible, straight lengths of piping should be used. Where there are bends in the pipeline, these should have a radius of at least five times the diameter of pipe.
 - t. The open ends of piping & fittings (with the exception of terminal taps or valves in regular use) shall always be made gas tight by means of either an appropriate terminal fitting or a plug, welded or brazed in position. Welding or brazing material shall have a melting point of at least 540⁰C.
 - u. Hammering over the ends of piping or plugging with wood as a means sealing shall not be allowed.
- 20. All the parts of the installations including piping, manifold and other accessories shall be as per relevant I.S. Standards. [IS 6044-1 (2000)].
 - 21. Empty cylinders shall be replaced by an experienced delivery person / worker from the authorized gas distributing company and no naked light shall be kept "ON" when the L.P.G. cylinder is replaced.
 - 22. No spare/loose cylinder more than what is permitted to be kept anywhere on the premises.
 - 23. No other fuel such as kerosene, diesel oil, coke, firewood, P.N.G. etc. shall be permitted on the premises. However electrical appliances & tandoor Bhatti may be permitted. There shall be segregation in between LPG burners & tandoor bhatti with a siporex wall or brick masonry wall of 22.5 cms thickness or Cement concrete wall of 10 cms. thickness with minimum height of 1.5 metre.
 - 24. Premises shall be kept well ventilated.
 - 25. Heat, hot gases and smoke shall be disposed off in safe manner
 - 26. Dwellings, smoking, use of naked light/flame (other than permitted) shall be prohibited on the premises.

27. Storage of any other inflammable substances shall be strictly prohibited on the premises.
28. No loft or mezzanine floor shall be constructed unless prior approval from competent authorities.
29. If loft is approved, there shall be no kitchen room below the loft and loft shall only be used for storage purpose.
30. If mezzanine floor is approved, there shall be no kitchen room below mezzanine as well as on the mezzanine floor. The staircase landing of mezzanine shall be towards the entrance of the premises/away from kitchen
31. The authenticity of the existing loft/mezzanine floor shall be verified by A.E. (B&F) & report of the same shall be produced at the time of inspection for Compliance certificate, failing to which compliance certificate will not be issued.
32. L.P. Gas detector (as approved by The Petroleum & Explosive Safety Organisation- PESO) shall be installed as per IS/IEC-60079-20 near gas installation so as to give alarm for L.P.G. leakage.
33. One No. of dry chemical powder ABC type fire extinguisher of 09 kgs. capacity for every 100 sq. mtrs. having BIS marking and 2 Nos. of buckets filled with dry and clean sand shall be kept on the premises. (however quantity will be finalized with due inspection on site by the Fire Safety Compliance Officer depending upon the type of structure, trade area & other hazard).
34. The compliance of the Fire safety measures/ requirements which is mandatory from fire safety point of view, shall indemnify and in case of default, the user is liable for prosecution.
35. Owner/Occupier must appoint Fire Marshal / Fire warden /fire safety officer from amongst his employees who is acquainted with evacuation procedure. He should have designated uniform such as fluorescent jacket / Arm band, cap & badge easily identifiable by citizen/users. He should also possess a whistle to alert customers/guest in case of emergency. Owner/Occupier must ensure that Fire Marshal / Fire warden /fire safety officer is present all the time during working hours. His name/s & contact details must be submitted to this department.
36. Staff shall be well acquainted with fire-fighting equipment.
37. Luminous 'Fire Exit', 'Way to exit' sign shall be provided at suitable locations showing the direction of each exit.
38. The trade license, compliance certificate from C.F.O.'s dept., consumer number along with name of the distributor/ company supplying the LP Gas and details of the agency maintaining gas installation shall be kept available on the premises all the time.
39. Lay-out plan showing details about entry, exit, gas burners, pipe line, location of staircases (if applicable) etc., , shall be displayed at the prominent place on the premises.
40. Evacuation plan shall be displayed conspicuously at the prominent location.
41. At any time premises shall not be overcrowded beyond occupant load certified by Architect.

Note: The supply of Liquefied petroleum gas to non- domestic category shall be as notified by the Central Government from time to time.

Safety Precautions:

A. In case of leakage of L.P. Gas:

1. Close the main valve of the cylinder at regulator assembly. In case of leakage from main valve of the cylinder, fix the safety cap of the cylinder in

its place so as to stop the leakage & the cylinder shall be moved to an open space.

2. Ventilate the premises by opening all the doors, windows.
3. Do not operate (ON or OFF) any electrical switch. Let it be as it is.
4. Avoid any ignition source such as any naked flame, lighting match stick, gas lighter, any type of spark. Put out the any lighted flame in close vicinity.
5. Evacuate the premises.
6. If you cannot stop the leakage, inform Fire Brigade and your L.P. Gas dealer.

B. In case of fire at supply pipe / tube:

1. Inform Fire Brigade immediately and evacuate the premises as early as possible.
2. Till Fire Brigade arrives try to close the Gas supply by turning off the main valve at regulator assembly /manifold.
3. Do not put out the flame until you shut off the main valve (supply of the gas).
4. Once the gas supply is shut off, try to put out the flame by smothering with wet cloth, bucket of water or using fire extinguisher.

Above mentioned fire safety measures have been stipulated irrespective of ascertaining area authenticity. However same shall be checked & verified by the concerned authority of MCGM.

All the premises who comply all fire safety norms/ recommendations are requested to put up board at prominent location at the entry in English and Marathi stating that "This premises is fire safety compliant" and "हा परिसर अग्नि सुरक्षिततेच्या दृष्टीने परिपूर्ण आहे."

Note:-

1. These remarks are offered from fire risk point of view only, without prejudice to legal matters pending in the court of law, if any & are valid subject to necessary permission/clearance under section 394/390 of M.M.C. Act and other permissions by concerned ward authorities, Environment Authority, etc. as per rules applicable, are obtained from concerned departments/authority. Also the authenticity & status of the structure including loft/mezzanine floor if any & complete area of the premises shall be verified by Ward Authorities, before issuing permissions for commencement of the said activity.
2. Any additional fire safety requirements if necessary, will be suggested by Inspecting officer after inspection, depending upon the type of structure, trade area & other hazard, etc.
3. Fire Brigade dept. reserves the right to change/alter/add/delete the terms and condition of these fire safety remarks as per the situation permits with prior intimation to the occupier.