

## LPG Association Guidance

### Covering:

Groups of cylinders installed for use

Cylinder and tank security

Signage

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LPG Association of New Zealand Inc  
PO Box 1776  
Wellington  
New Zealand



## Foreword

The LPG Association has developed these guides to provide an agreed interpretation of the relevant requirements of the HSWA Hazardous Substance Regulations 2017, relating to the items listed below.

- **Groups of cylinders installed for use.**
- **Cylinder and tank security.**
- **Signage.**

WorkSafe NZ were consulted in the preparation of these guides.

The guidance is based on AS/NZS 1596: 2014 The storage and Handling of LPG.

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## Section 1: Groups of cylinders installed for use

**Groups of LPG cylinders containing less than 100 kg** can be considered as separate locations if:

1. There is at least 3 metres between the groups; AND
2. There are no combustible materials between the groups. Combustible materials such as vegetation, combustible rubbish (rags, boxes etc.).

**Groups of LPG cylinders containing over 100 kg installed for use** can be considered as separate locations if:

1. There is the greater of 3 metres or twice the required separation distance to protected place between the groups (as represented in the table below);  
and

**Distances Between Cylinder Groups**

Group Quantity (kg)	Between Groups (m)
Up to 100	3
150	3
200	3
300	4

2. There are no combustible materials between the groups. Combustible material such as, vegetation, wooden structures, combustible rubbish (rags, boxes etc.);  
and
3. Each group of LPG cylinders complies with regulation 11.20; i.e.
  - For more than 100 kg and up to 300 kg on a building wall, the walls of the buildings behind and 2 m either side of the cylinders are to be constructed of fire-resisting materials
  - For cylinder groups with more than 300 kg but not more than 1,000 kg on a building wall, the wall of the building is vapour-tight and 60/60/60 fire resistance rated for the length of the wall directly behind the cylinders and extending at each end to a distance of at least 2 m from the end of the bank of cylinders.

## Section 2: Security

For LPG the general requirement for security is prescribed in Regulations 10.4 (1)(b) and 10.34 (1)(b) of the Health and Safety at Work (Hazardous Substances) Regulations 2017 (HS Regulations):

These regulations require that where over 100 kg of LPG is present at the location and it is left unattended, the LPG must be appropriately secured from access by persons other than those permitted by the PCBU to access the substance.

### For LPG cylinders

Further controls are prescribed in Regulation 11.43 (4)(i) of the HS Regulations:

This regulation requires cylinders at the location to remain secured or have enhanced security e.g. the site has a fenced perimeter, the cylinders are located in a cage, or a tool is required to disconnect the cylinders, or an equivalent security arrangement is in place.

For installations less than 1,000 kg, a wrench or spanner operated fittings, security caps or lock boxes are an acceptable means of security.

For installations 1,000 kg and over, a fence or cage is required to secure the substance.

**For LPG tanks, AS/NZS 1596 The storage and handling of LP Gas can be used for guidance**

#### 6.12.1 Tank security

Where a tank is accessible to the public, it shall be provided with a means to prevent tampering with any tank fitting that could lead to an escape of gas, and that is able to be locked. The provision shall be one of the following:

- (a) A fully surrounding fence complying with Clause 6.12.2 or an equivalent security fence surrounding the whole of the property.  
or
- (b) A fence complying with Clause 6.12.2 and surrounding only those components requiring protection.  
or
- (c) A lockable enclosure complying with Clause 6.12.3, provided that the tank capacity is less than 8 kL and a tank of any size is not in a school, playground, or public place (e.g. a park or similar).

NOTE: Tampering, for the purpose of this Clause, relates to tampering without the use of tools.

NOTE: As a generalisation a tank located within an outer security fence, does not require a separate security fence so long as the PCBU can control the site.

### 6.12.2 Security fence

A security fence shall be at least a chain-wire fence, not less than 1.8 m high and incorporating an outward opening, lockable gate not less than 1 m wide. In addition, a fully surrounding fence shall be not less than 1.5 m from the tank and shall be kept locked when not under supervision.

### 6.12.3 Lockable enclosure

Where a lockable enclosure is used, its design shall be such that—

- (a) the possibility of tampering with the protected fittings is prevented;
- (b) if gas discharging from a safety valve is ignited, the resulting flame will burn clear of the tank;  
and
- (c) moisture is not retained within it.

Any such enclosure shall be kept locked when not in use.

## Section 3: Signage

The legislative requirement for signage is prescribed in Regulations 2.5 and 2.6 of the HS Regulations, in particular 2.5 (2)(c)(iv). This requires the signage to be “clearly visible and legible at a distance of not less than 10 m under varying conditions”.

Clause 3.4.2 of Australian Standard AS 1319-1994 Safety signs for the occupational environment requires a letter size of 5 mm per metre upper case and 4 mm per metre lower case. The statement is also made that this is approximately twice that required for legibility alone.

Hence a letter size of 30 mm will meet the legibility requirement. The reason stated in AS 1319 for doubling the letter size is to provide more prominent legends where signs will not always be within the observers’ field of view.

Therefore 30 mm letter size is acceptable for the legibility requirements if it is clearly visible, i.e in an area which is not obscured or in permanent shade. If the sign is not clearly visible then the letter size will need to be at least 50 mm.

Where more than 50 kg of LPG in cylinders is present within a building signage must be placed at every vehicular and pedestrian entrance to the building and land on which the building is located. If the LPG is located in a particular room or compartment within the building signage is placed at each entrance to the room or compartment. These requirements do not apply where LPG is piped into the building.

Where more than 250 kg of LPG is present in an outdoor area signage must be placed immediately next to that area.

Example of 30mm lettering:

**LPG**