

Safe Storage of Liquefied Petroleum Gas (LPG) Cylinders

What to do

- **ALWAYS** store cylinders in a well-ventilated place, away from sources of heat and ignition.
- Store and use cylinders in an upright position, unless specifically design to be stored horizontally.
- Cylinders are to be stored outside, away from building entry/exit points and drains.
- Restrain cylinders to prevent them toppling over.
- Protect cylinders from impact damage due to vehicle movements.
- Secure cylinders to restrict access to authorised personnel only.
- Position a cylinder store so that it is readily accessible for cylinder movements with manual handling distances kept to a minimum.
- Ensure clear access is always maintained that allows vehicles access to collect and deliver cylinders.
- Equip the storage area with adequate signage to provide warnings and safety information on the products being stored.
- The store is to be furnished with adequate lighting to assist in providing a safe work environment and aid cylinder identification.
- Ensure physical partitions or barriers used to reduce the required separation distances are suitably constructed of appropriate material.
- Ensure there are physical and management security controls to prevent tampering, vandalism, arson and theft and to effectively monitor the usage of gases, as well as any specific local considerations.

What not to do

- **DO NOT** store or use cylinders below ground level e.g. in cellars or basements.
- **DO NOT** locate a storage area adjacent to buildings, structures and geographical features that may adversely affect natural ventilation.
- **DO NOT** store cylinders in the vicinity of cylinders containing other gases or hazardous substances without specialist advice.
- **DO NOT** use cylinders in places where gas is prohibited, e.g. as high-rise flats.
- **DO NOT** keep cylinders near corrosive, toxic or oxidant material.
- **DO NOT** permit cylinders in sit in pools of water allowing the onset of external corrosion.
- **DO NOT** allow vegetation and accumulations of readily combustible material to build up adjacent a cylinder store.
- **DO NOT** hold excessive levels of stock.

Safe Storage of Liquefied Petroleum Gas (LPG) Cylinders

Cylinder Storage

Cylinders are designed for outdoor storage; however, some applications require protected storage conditions for quality, cleanliness and security reasons which may entail a roof covering. Cylinders may also need additional protection from local environmental conditions.

Where required, the roofing shall be designed to prevent gas pockets accumulating, for example, gaps between the wall and sloping roof, natural ventilation in the roof apex.

Indoor Storage Risk Assessment

Internal storage is not recommended, where it is unavoidable a documented justification process shall be undertaken to validate the need for indoor storage.

In addition to the risk assessment required by Regulation 5 of **The Dangerous Substances and Explosive Atmospheres Regulations 2002** (DSEAR), the chosen location will be subject to a risk assessment under **The Management of Health and Safety at Work Regulations 1999** specific to the indoor store, to confirm its suitability and the control measures required.

An indoor store may meet the criteria to be a confined space, where in the event of a release of gas the atmosphere would be affected sufficiently to represent a specific risk. In such cases a specific confined space risk assessment is required. Refer to the Health and Safety Executives (HSE) Approved Code of Practice (ACOP) **L101 Safe work in confined spaces** for further guidance.

Manual Handling Risk Assessment

Regulation 4 of **The Manual Handling Operations Regulations 1992** require that an assessment of manual handling operations is conducted. Following the assessment(s), training should take place. Where the assessment indicates that the work exceeds guideline limits, wherever practicable the operation should be mechanised or handling aids provided.

Specialist Guidance

The British Compressed Gases Association (BCGA) **Guidance Note 2**, offers guidance for the storage of gas cylinders in the workplace, defines the principles of safe practice for the storage of gases in cylinders and cylinder bundles.

The Liquid Gas UK (formerly UKLPG) provide additional information on the storage of LPG cylinders, in their **Code of Practice 7**, entitled 'Storage of full and empty LPG cylinders and cartridges'.

The BCGA **Guidance Note 13** offers guidance on the completion of a risk assessment required under DSEAR legislation.

The above information is provided by the UK Material Handling Association (UKMHA) as guidance and, where applicable, takes account of current best practice and our interpretation of current legislation. However, the UKMHA accepts no responsibility for the recommendations, advice, statements, opinions and conclusions set out above, either expressly or by implication. No warranty or representation of assurance, in respect of the accuracy or validity of the same is given.

The information in this Fact Sheet has been assembled and interpreted to give truck owners and users basic guidance on frequently asked questions. Further important information will be given in the quoted reference documents. Responsibility for meeting the safety obligations discussed rests with the employer, and the UKMHA will not accept liability for any problem arising as a result of the content of this document. Technical Bulletins, containing more detailed information and updated as appropriate, are made available free to members of the **UKMHA SAFE USER GROUP**.

Published by UKMHA – UK Material Handling Association

34B Kingfisher Court,
Hambridge Road,
Newbury,
Berkshire RG14 5SJ

01635 277570
info@ukmha.org.uk
www.ukmha.org.uk