

# **DURHAM COUNTY COUNCIL**

## **PETROLEUM PRACTICE NOTE J**

### **STORAGE OF PETROLEUM SPIRIT IN CANS AND DRUMS**

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## Practice Note J

### THE STORAGE OF PETROLEUM-SPIRIT IN CANS AND DRUMS

#### Introduction

This Information Note gives a précis of the rules and regulations that apply to the storage of petroleum-spirit in cans and drums.

#### Definition of Petroleum-spirit

The definition of petroleum-spirit is 'petroleum which, when tested in accordance with Part A.9 of the Annex to the European Commission Directive 92/69 EEC, has a flash point of less than 21 °C'. The definition embraces petroleum products such as hexane, toluene and xylene, which are used as a solvent or raw material in the chemical and manufacturing industries.

#### Fire and Explosion Hazards

Petroleum-spirit is a volatile liquid that gives-off vapours even at sub-zero temperatures. The vapor, when mixed with air in certain proportions, can form a flammable atmosphere, which can deflagrate or explode if there is an accumulation in a confined space and a source of ignition is present. A flammable atmosphere exists when the proportion of vapor to air is within the approximate range of 1% to 8%. Petrol vapor is heavier than air and does not disperse easily in still air conditions. The vapours tend to sink to the lowest level of the surroundings and will accumulate in cellars and drains etc.

It is, therefore, essential that the containers are of a sound vapor tight construction and the place in which the containers are located is suitable for the storage of petrol and free from sources of ignition.

#### Legislation

The relevance of the laws relating to the storage of petroleum-spirit in cans and drums is dependant on whether or not the place of keeping is a workplace<sup>1</sup> and if it is not a workplace, the purpose for which the petrol is to be used.

#### Workplace Storage

Petroleum-spirit kept at a workplace falls within the purview of the Dangerous Substances & Explosive Atmospheres Regulations 2002 (DSEAR). This means that the employer (duty holder) must;

- carry out a risk assessment of any work activities involving the storage and use of petrol
- provide measures to eliminate or reduce the risks as far as is reasonably practical
- provide equipment and procedures to deal with accidents and emergencies
- provide information and training to employees
- classify places where explosive atmospheres may occur into zones and mark the zones where necessary with an EX triangular warning sign

This assessment will include determining both the suitability of the containers in which the petrol is to be kept and the place where the containers are to be stored. It should be noted that the Petroleum-Spirit (Plastic Containers) Regulations 1982 no longer applies to workplace storage but the containers employed for petroleum storage should be suitable to store petroleum spirit. The effect of this disapplication is that there are no longer any restrictions on the type, maximum capacity and number of plastic containers that can be used at a workplace.

The enforcing authority for DSEAR is the authority that enforces the Health & Safety at Work etc Act 1974 at the premises; this will either be the Health & Safety Executive or the Environmental Health Officer of the local authority.

### **Domestic/non-workplace storage without a licence**

A licence to store petrol is not required if the total quantity does not exceed 275 litres. However, it must be kept in a safe place.

If the quantity of petrol exceeds 30 litres, but does not exceed 275 litres and is kept as a fuel for an internal combustion engine(s) and not for the purpose of sale, the Petroleum Consolidation Regulations apply and the storage must be notified to the Petroleum Enforcing Authority (PEA). The Petroleum Consolidation Regulations 2014 lay down a strict set of rules which cover the construction and marking of the containers, the construction of the storage place and a requirement to notify the Petroleum Licensing authority (PLA). The responsible person must notify the PEA Petroleum Officer in writing, by email or by calling the Petroleum Officer at the number below.

The common storage requirements for this type of storage are;

- Petrol is not stored in living accommodation
- Petrol is not dispensed at the storage place
- If the storage place is not in the open air, it has a direct exit to the open air and is ventilated to it
- All reasonable precautions are taken in the storage place to prevent any sources of ignition or heat that would ignite petrol or its vapour
- Petrol is not used in the storage place other than;
  - In the fuel tank of any internal combustion engine
  - In quantities (not exceeding 150mm at any one time for cleaning or as solvent repair

**NOTE: Dispensing means manual or electrical pumping of petrol from a storage tank.**

### **Domestic Storage of petroleum in Drums and Cans and Demountable tanks**

If the quantity of petrol exceeds 275 litres (the amount of petrol in a car's fuel tank or boat's fuel tank does not count towards this total) and/or it is kept for purposes other than as a fuel for internal combustion engines, such keeping will only be legal if a petroleum licence has been granted by the PLA under the provisions of the Petroleum (Consolidation) Regulations 2014. Where a licence is required, the PLA has the powers to attach site specific conditions that are intended to control the risks of fires or explosion.

### **Containers**

The new 2014 Regulations state that up to 30 litres of petrol can be stored in the following containers;

- Suitable Plastic containers up to 10 litres capacity (previously this was limited to 5 litres)
- Suitable Metal containers up to 20 litres capacity (previously this was restricted to 10 litres)
- Up to 30 litres of petrol can be stored in a single demountable fuel tank at the premises.

### **Designers/manufacturers/suppliers of portable petrol storage containers**

The basic design safety features in the Petroleum-Spirit (Plastic Containers) Regulations 1982 have been carried forward into the new Regulations and now include metal containers. There are no new or additional requirements included in the new Regulations so plastic

containers that currently comply with the 1982 Regulations will comply.

### **Requirements relating to the manufacturing of petrol containers**

The requirements remain the same apart from new provisions that allow storage of petrol in larger containers. The general principles regarding the requirements for portable petrol storage containers are set out in the new Regulations and state that a portable petrol storage container must:

- have a nominal capacity
- no greater than 10 litres if made of plastic
- no greater than 20 litres if made of metal
- have a total capacity between 10% and 15% more than the nominal capacity
- be made of either metal or plastic that is suitable and safe for the purpose and will not significantly degrade due to exposure to petrol or naturally occurring ultra-violet radiation
- be designed and constructed so that;
  - it is reasonably robust and not liable to break under the normal conditions of use
  - the escape of liquid or vapour is prevented
  - petrol can be poured safely from it
  - it is not unsteady when placed on a flat surface.
- be marked or labelled in a legible and indelible form with;
  - the words 'PETROL' and 'HIGHLY FLAMMABLE'
  - an appropriate hazard warning sign
  - the nominal capacity in litres
  - the manufacturer's name and the date and month of manufacture.

### **Further Information**

The Health and Safety Executive's publications HSG51<sup>2</sup> and HSG140<sup>3</sup> give more detailed information on the storage and handling of flammable liquids.

The Petroleum Officer for Durham County Council is the enforcement officer within the administrative boundaries of Co Durham. They can be contacted on 03000 260 943, or at the following email address. [petroleumlicensing@durham.gov.uk](mailto:petroleumlicensing@durham.gov.uk)

<sup>1</sup> The definition of a 'workplace' is given in Regulation 1 of DSEAR.

<sup>2</sup> [HSG51 The Storage of Flammable Liquids in Containers](#). ISBN 0-7176-1471-9

<sup>3</sup> [HSG140 The Safe Use and Handling of Flammable Liquids](#). ISBN 0-7176-0967-7.

These booklets are also available from HSE Books, PO Box 1999, Sudbury, Suffolk, C010 6FS. Telephone: 01787 881165. Fax: 01787 313995