

Chief Fire Officers' Association

Information Note

Petrol Stored in Containers at Domestic and Non-workplace Premises

1 Foreword:

1.1 The main and originating regulations covering the storage of petrol in cans and drums are the Petroleum-Spirit (Motor Vehicles etc) Regulations 1929 (MVR). In order to understand the intention of MVR, it has to be recognised that they came into force in an era when all motor cars and most commercial vehicles were powered by petrol engines, the jet engine had yet to be invented and petrol filling stations were few and far between; especially in rural areas.

1.2 There was, therefore, a need for regulations that would allow business, aerodromes, marinas and members of the public to keep their own significant supply (upto 275 litres) of petrol as a fuel for cars, aeroplanes and boats etc without the need to hold a petroleum licence.

1.3 MVR lays down a strict set of rules covering the use of the petrol, the construction (metal) and marking of containers, the construction of 'storage places', separation distances, the quantities that can be kept and notification to the petroleum licensing authority.

1.4 As MVR makes no reference to a 'site' or 'property boundary', this means that there may be a number of 'storage places' on any one 'site' or within any one property boundary provided they are more than 6 metres apart. In effect, on a large property like an aerodrome, there could be an indeterminate number of 'storage places' (fuel dumps) holding a maximum of 275 litres each.

1.5 At the other end of the spectrum, MVR effectively places a limit of 20 litres (2 x 10 litre metal containers) that can be kept in the integral garage of a domestic property.

1.6 Amendments to MVR have been made over the years, but they have been of a cosmetic nature; metrication and disapplication of 'workplaces' being but two. The substantive element of MVR, as outlined in paragraph 1.3 above, has remained unchanged.

1.7 When the Petroleum-Spirit (Plastic Containers) Regulations 1982 came into force, they were designed to harmonise with MVR insofar as they allow for a maximum of 2 x 5 litre plastic containers to be kept (in a 'safe place') as an addition to the limits placed on the keeper (occupier) by MVR. In practical terms this means that the 275 litres limit described in paragraph 1.4 could be increased to 285 litres, if the 2 x 5 litre plastic container allowance is taken advantage of; with the 20 litre limit explained in paragraph 1.5 likewise being increased to 30 litres.

1.8 The various quantities of petrol that can be kept, the requirements of the 'storage places' and separation distance obligations are detailed in the Appendix of this Note. For the convenience of the reader, the wording of the Appendix is given a present day slant where appropriate.

2 Introduction:

2.1 This Information Note gives a précis of the rules and regulations that apply to the domestic [non-workplace] storage of petroleum-spirit in cans and drums.

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Note: Petrol stored in cans and drums at 'workplaces' falls within the purview of the Dangerous Substances & Explosives Atmospheres Regulations 2002 (DSEAR); as such, it is exempt from the requirements of the Petroleum (Consolidation) Act 1928. The enforcing authority for DSEAR is the Authority who has the responsibility for enforcing the Health & Safety at Work etc Act 1974 at the workplace.

2.2 The purpose of the Note is to assist fire safety inspectors (employed by a fire & rescue service that is a petroleum licensing authority) in the enforcement of the rules and regulations that apply to the domestic and non-workplace storage of petrol in containers. The Note will also be of value to those persons storing petrol in the understanding of their legal obligations.

3 Definition of Petroleum-spirit:

3.1 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.

Note: Any Bio Fuel which contains petroleum-spirit will also fall within this definition.

4 Fire and Explosion Hazards:

4.1 Petroleum-spirit is a volatile liquid that gives-off vapours even at sub-zero temperatures. The vapour, 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.

4.2 A flammable atmosphere exists when the proportion of vapour to air is within the approximate range of 1% to 8%. Petrol vapour 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.

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

5 Legislation:

5.1 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 workplace¹ and if it is not a workplace, the purpose for which the petrol is to be used.

6 Storage of Petrol at Domestic and Non-workplace Premises/Properties:

6.1 Where petrol is kept at domestic premises/property or any other place where no person is employed to work (e.g. a recreational club where all the maintenance work is carried out by the members), the storage is controlled by either the: -

- Petroleum (Consolidation) Act 1928 (PCA);
- Petroleum-Spirit (Motor Vehicles etc) Regulations 1929 (MVR); or
- Petroleum-Spirit (Plastic Containers) Regulations 1982 (PCR).

¹ Section 52 of the Health & Safety at Work etc Act 1974 gives the legal definition of 'work' and 'at work'.

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6.2 If the quantity of petrol does not exceed 275 litres and it is kept as a fuel for an internal combustion engine(s) and not for the purpose of sale, the MVR apply. MVR lays-down a set of strict rules which cover the construction and marking of the containers, the construction of the storage place and a requirement (in certain circumstances) to notify the petroleum licensing authority (PLA).

6.3 In circumstances where the quantity of petrol exceeds 275 litres and/or is kept for purposes other than as a fuel for internal combustion engines or is kept for the purpose of sale; such keeping will only be legal if a petroleum licence has been granted by the PLA under the provisions of the Petroleum (Consolidation) Act 1928. There is an exception to this rule where quantity of petrol does not exceed 15 litres; in this case a licence is not required. Where a licence is required, the PLA has the powers to attach site specific conditions that are intended to control the risk of fires or explosions².

6.4 The Petroleum-Spirit (Plastic Containers) Regulations 1982 apply to the keeping of petrol (for use as fuel for an internal combustion engine) at domestic premises and any other places where persons are not employed to work. These Regulations impose restrictions on the: -

- construction, nominal capacity (5 litres) and marking of (plastic) containers, in particular 'complies with S.I 1982/630' and the words 'Petrol' and 'Highly Flammable';
- places where they can be kept; and
- maximum number of plastic containers (2) that can be kept in any storage place.

6.5 The quantities of petrol allowed to be stored (under MVR) without a licence and restrictions that apply are detailed in Appendix 'A' of this Note.

6.6 As the PCA, MVR and PCR are all 'relevant statutory provisions' of the Health & Safety at Work etc Act 1974 (HSWA), enforcement of the Act and Regulations is carried out under the remit of HSWA; albeit the places of storage are not 'workplaces'.

7 Enforcement and Enforcing Authorities:

7.1 The Act and Regulations listed in section 5.1 (above) are enforced by the local 'petroleum licensing authority' (PLA). This will normally be the Trading Standards Department of the district or county council. However, in certain counties of England, the enforcement role has been allocated to the following fire and rescue services; namely: -

Cumbria, Cornwall, Durham & Darlington, East Sussex, Greater Manchester, Hertfordshire, Lincolnshire, London, Merseyside, Norfolk, Northumberland, South Yorkshire, Tyne & Wear, West Midlands and West Yorkshire.

7.2 For the purpose of fulfilling their statutory duty³ to enforce the Act and Regulations, PLAs are empowered under section 19 HSWA to appoint inspectors. In order for inspectors to carry out their enforcement responsibilities, they are delegated by their PLA with some or all of the powers under sections 20, 21, 22 and 25 HSWA.

7.3 Whilst all inspectors need to be delegated with powers under section 20, the delegation of the powers under sections 21 (improvement notices) 22 (prohibition

² See Appendix 'B' of PETEL circular No.65/63. <http://www.hse.gov.uk/lau/lacs/65-63.htm>

³ Section 18 HSWA.

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notices) and 25 (dealing with imminent danger) may vary with the policies of the individual PLAs.

8 Entry into Domestic Premises⁴:

8.1 Inspectors should not normally use their Section 20(2)(a) HSWA powers⁵ to obtain entry into domestic premises when searching for unlicensed petrol, or when investigating an accident or complaint.

8.2 Where illegal storage of petrol is suspected, in contravention of the PCA, entry should normally take place by either: -

- obtaining the permission of the owner or occupier, or
- using a warrant issued in accordance with section 18 of PCA.

8.3 Once entry has been made an inspector is at liberty to apply his/her other S.20 HSWA powers as appropriate.

8.4 If in exceptional circumstances, e.g. a flat or HMO (shared occupancy), an inspector considers it essential to exercise his/her S20(2)(a) HSWA powers to gain entry into the premises in connection with enforcement of PCA, the decision should ideally be made with the agreement of the senior officer.

8.5 In the interests of maintaining and enhancing the reputation of the Fire & Rescue Service for responsive and considerate relations with private individuals in domestic premises inspectors may wish to :-

- give prior warning as a normal practice for domiciliary visits, except in cases where the apparent urgency dictates an immediate visit, or an inspector is fortuitously able to call at once and is not able to make prior contact,
- establish identity, by appropriate use of warrant and/or visiting card (sometimes it may be important to explain the inspector's status in a particular scenario,
- send a brief letter confirming the contact and any action (if any).

8.6 In cases of licensed/legal storage at domestic premises and non-workplaces, this will be subject to normal enforcement procedures.

8.7 Petroleum Inspectors of the Fire & Rescue Services are available to give advice on matters related to the storage of petrol under MVR and PCR and the licensing of petrol storage.

9 Further Information:

The Health and Safety Executive's publications⁶ HSG51⁷ and HSG140⁸ respectively give more detailed information on the storage and handling of flammable liquids.

⁴ Section 8 is an edited extract of PETEL circular 85/7 'Petroleum Licensing Authorities – Powers of Entry into Domestic Property'.

⁵ At any reasonable time (or, in a situation which in his opinion is or may be dangerous, at any time) to enter any premises which he has reason to believe it is necessary for him to enter for the purpose of carrying into effect any of the relevant statutory provisions within the field of responsibility of the enforcing authority which appointed him.

⁶ Available from HSE Books, PO Box 1999, Sudbury, Suffolk, CO10 6FS. Telephone: 01787 881165. Fax 01787 313995.

⁷ HSG51 The Storage of Flammable Liquids in Containers. ISBN 0-7176-1471-9.

Appendix 'A'

**The Petroleum-Spirit (Motor Vehicles etc) Regulations 1929
(As supplemented by the Petroleum-Spirit (Plastic Containers) Regulations 1982)**

A1 Storage Place Requirements:

A1.1 The storage place can be either in a building or in the open air.

Storage in a Building or Other Single Structure:

A1.2 If the storage place is in a building, the following requirements apply: -

- there must be effective ventilation to open air;
- the entrance must be direct to open air;
- it must not form part of, or be attached to, any building used as a dwelling house or as a place where persons assemble for any purpose unless the storage place is separated from the remainder of the building a substantial floor and/or partition that are constructed from materials achieving a ½ standard of fire-resistance⁹. The floor or partition must have no openings into the building.
- It must not be situated under any staircase or under any other means of escape unless the storage place is separated from the escape routes by a substantial floor and/or partition constructed from materials achieving a ½ standard of fire-resistance⁷. The floor or partition must have no openings into the escape routes.

A1.3 An exception to this rule is where the petrol is kept in no more than two metal containers having a capacity of no more than 10 litres each. This figure of 20 litres is in addition to the petrol contained in the fuel tanks of any internal combustion engines. A further relaxation and caveat to this exception is that the partition (wall) can have an opening (door) provided the door is of a ½ hour standard of fire-resistance⁷ and fitted with a self-closing device.

Open Air Storage:

A1.4 The only structural requirement for open air storage is that there must be a bund or some other retention device that will prevent the outflow of petrol should there be an outbreak of fire. The requirement for a retention device only applies where the containers are of capacity >10 litres.

Spillage Retention:

A1.5 The storage place, whether in a building or in the open air, must be provided with a bund in circumstances where containers with a capacity >10 litres are kept.

A.2 Separation Distances:

A2.1 'Storage places' are considered to be separate 'storage places' if they are >6 metres apart; even if they are on the same site, land or property.

A2.2 The 'storage place' must be > 6 metres from any building, highway or public footpath where the petrol containers have a capacity of >10 litres.

⁸ HSG140 The Safe Use and Handling of Flammable Liquids. ISBN0-7176-0967-7.

⁹ In some instances, depending on the use of the building, a 1 hour standard of fire-resistance may be mandatory.

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If the storage place is situated within 6 metres of a building, any stack of timber or other inflammable substances¹⁰, the occupier must give notice to the PLA if the containers have a capacity of >10 litres; before the storage commences.

A3 MVR Containers:

A3.1 The containers must be of a sound metal construction that will not leak or release petrol vapours.

A3.2 The containers must be marked or labeled with the words 'Petroleum-Spirit – Highly Inflammable'¹¹.

A4 Fire Precautions:

A4.1 The occupier has an on-going duty to exclude all sources of ignition from the 'storage place'. In practice, only electrical lighting and fitting suitable for a zone 2 hazardous area should be fitted or used in the 'storage place'

A5 Fire-fighting Equipment:

A5.1 The 'storage place' must be provided with one or more fire extinguishers suitable for dealing with fires involving petrol. The number of extinguishers will depend on the size of the 'storage place' and the quantity of petrol normally kept. For a domestic garage, 1 x 4.5 kg dry powder should be adequate.

A6 Notification Requirements:

A6.1 The occupier of the proposed 'storage place' must give notification, in writing, to the PLA. The notification must be repeated annually in the month of January.

See Table on page 7

¹⁰ This caveat of MVR is open to interpretation, as the regulations give no determination as to the size of the stack or as to the quantification of inflammable substances.

¹¹ In modern day parlance, it will be acceptable to use the word 'flammable' instead of 'inflammable'.

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Table

MVR as Supplemented by PCR			
Maximum Quantity (litres(l))	'Storage Place' Requirements	Separation Distances (metres) & Notification Criteria	Prior Notification to PLA
Regulation 5d 2 x containers ¹² with a capacity <10l and the petrol in any fuel tank. Plus 2 x 5l plastic containers.	If forming part of a building, must be separated by a FR wall and ceiling from any occupied parts of the building. Any door openings must be FR self-closing.	N/A	N/A
Regulation 6 275 in containers ¹² with a capacity <10l, inclusive of the petrol in any fuel tanks. Plus 2 x 5l plastic containers.	In a detached building; or In the open air; or If forming part of a building, must be separated by a FR wall and ceiling. With no door openings.	N/A but must be >6m from any other 'storage place'. As above. As above.	N/A N/A N/A
Regulation 7 275 in containers ¹² with a capacity >10l, inclusive of the petrol in any fuel tanks. Plus 2 x 5l plastic containers.	In a detached building; or In the open air. (with a bund)	Within 6m of any building, stack of timber/flammable substances. Within 6m of any building, stack of timber/flammable substances.	Yes Yes
Regulation 8 2 x containers ¹² with a capacity <10l and the petrol in any fuel tank. Plus 2 x 5l plastic containers.	The containers (other than the 2 x plastic containers) must be carried on the vehicle or boat etc.	Within 6m of any building, stack of timber/flammable substances.	N/A
PCR in Isolation			
2 x 5l plastic containers	In a 'safe place'. That is to say, a garage or shed etc.	Any 2 ('safe places') <6m apart and in the same occupation are treated as 1 place.	N/A
2 x 5l plastic containers	Carried on a motor vehicle or boat etc.	N/A	N/A

Under no circumstances should the petrol be kept in the 'living accommodation' of a dwelling house or other residential property.

¹² Metal containers marked 'Petroleum-Spirit – Highly Inflammable'.