

AUTOGAS SAFETY INFORMATION

Autogas retailers should be especially aware of **the Operating Instructions re Vehicle Filling** (pages 5-8 below)

HAZARDS IDENTIFICATION:

Extremely flammable liquefied gas that readily forms explosive air vapour mixtures

POTENTIAL HEALTH EFFECTS:

- Eye contact with product or gas under pressure can cause cold burns
- Inhalation may cause irritation to nose and/or throat, headache, nausea, vomiting, dizziness, drowsiness and/or euphoria (In poorly ventilated or confined spaces, unconsciousness and asphyxiation may result)
- Skin contact with product can cause frostbite (cold burns)

FIRST AID:

- **Eyes** – immediately wash eyes with plenty of cold water for at least 15 minutes. Seek medical attention
- **Skin & cold burns** – immerse skin in tepid water until circulation returns
- **Inhalation** – immediately remove patient from contaminated area. Keep warm. If breathing has stopped, give artificial respiration. Seek medical help

FIREFIGHTING:

DO NOT use water or foam to extinguish fires - vacate the area and call the Fire Brigade.

Small fires can be attacked with dry powder fire extinguishers. If it is safe to do so, close container valve and allow fire to burn out. Beware of vapour accumulating to form explosive concentrations. Explosive vapours may travel and be ignited at remote locations and flash back

ACCIDENTAL RELEASE MEASURES:

Evacuate the area, except for personnel dealing with the emergency. Extinguish or isolate power from sources of ignition. Ventilate area. Isolate gas supply to the point of leakage, if safe to do so. Cover drains and sewers etc. Inform authorities if major spillage occurs

HANDLING AND STORAGE:

- **Handling** – Cylinders containing propane are designed to give liquid or vapour off-take. Vapour off-take must be used in the vertical position. Liquid off-take must be used in the position indicated on the cylinder

A face shield and impervious rubber gloves should be worn when transferring this product as a liquid

The risk of inhaling high concentrations of vapour should be avoided by provision of suitable ventilation

- **Storage** – The product must be stored in purpose designed mild steel cylinder(s) or tank(s) or other systems of suitable pressure rating. These should be segregated from oxidant gases and other oxidants in store

Pipework and handling equipment should be designed for the purpose and be electrically bonded and grounded (earthed) to prevent accumulation of static charge

Reference should be made to the relevant Codes of Practice for Safe Storage and Handling of LPG produced by HSE and LPGA (See Section 13)

EXPOSURE CONTROLS/PERSONAL PROTECTION:

The following occupational exposure standards have been approved by the Health & Safety Commission on EH40 and are relevant to this product:

	Long-term Exposure Limit (ppm) (8hr TWA)	Short-term Exposure Limit (ppm) (15 min period)
Liquefied Petroleum Gas *	1000	1250

* *Pure propane may be regarded as a simple asphyxiant*

- **Ventilation** – use the product in a well-ventilated place. Use local ventilation to control exposure of the product to below the recommended limits
- **Respiratory Protection** – should be used if there is a risk of high vapour concentration
- **Hand Protection** – use rubber gloves if in contact with liquid
- **Eye Protection** – use chemical goggles or face shield when handling the product in liquid form
- **Skin Protection** – wear safety boots or shoes when handling cylinders. Wear protective overalls with long sleeves to cover exposed skin

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	Colourless liquefied gas
Odour	Odourless odorant added to provide a distinctive smell
Boiling Point	-42°C
Flash Point	-104°C (PMCC)
Flammability Limits	2% to 11% in air
Autoflammability	460-580°C
Vapour Pressure	7.5 bar at 15°C
Specific Gravity of Liquid	0.512 at 15°C
Specific Gravity of Vapour	1.5 at 15°C (Air = 1.0)
Solubility in Water	Insoluble

STABILITY AND REACTIVITY:

- **Stability** – can form explosive mixture with air
- **Incompatibility** – propane reacts violently with strong oxidizing agents, peroxide, plastics, chlorine dioxide and concentrated nitric acid
- **Hazardous Decomposition**
- **Products** – normally carbon dioxide (carbon monoxide if deficiency in oxygen supply)

DISPOSAL CONSIDERATIONS:

Do not discharge product into areas where there is a risk of forming an explosive mixture with air. Cylinders are the property of Premier Autogas Limited and are returned to us. Emptying of tanks is the responsibility of Premier Autogas Limited

TRANSPORT INFORMATION:

Classifications for transportation are:

UN Number	1978
Class	2(3) hydrocarbon gasses, liquefied
Classification for Carriage	Flammable gas
Hazchem Code	2YE
ADR/RID	Class 2 liquefied gas (2, 3b)
LATA/ICAO	Class 2

REGULATORY INFORMATION:

Product Label	F+ Extremely flammable
Risk Phrases	R13 Extremely flammable liquefied gas S16 Keep away from sources of ignition – No Smoking S33 Take precautionary measures against static S9 Keep container in a well-ventilated place
References	The Chemicals (Hazard Information & Packaging for Supply) Regulations 1994 SI No 3247 + Amendment 1996/(1092) The Control of Substances Hazardous to Health Regulations 1994 SI No 3246 + Amendment 1996/3138, 1997/11 The Health & Safety at Work Act 1974

FURTHER INFORMATION:

The user of this product is advised of the following relevant information:

- Fire Certificates (Special Premises) Regulations 1976 SI No 2003
- Notification of Installation Handling Hazardous Substances Regulations 1982 SI No 1357
- The Storage of LPG at Fixed Installations (UKLPG Code of Practice No.1 Part 1)
- The Keeping of LPG in Cylinders and Similar Containers (UKLPG Code of Practice No.7)

The above publications can be obtained from:

- HSE Books, PO Box 1999, Sudbury, Suffolk CO10 6PS
Tel: 01787 881165
- UKLPG, Camden House, Warwick Rd, Kenilworth, Warwickshire CV8 1TH
Tel: 01425 461612

The information in this document is believed to represent good practices at the time of publication, however no responsibility or liability is accepted by Premier Autogas Limited for any loss or damage arising out of the information given. It is vital that all persons concerned with the use of this product adhere to all legal requirements, regulations, COP's and standards, particularly those relating to health, safety and environmental measures.

OPERATING INSTRUCTIONS - VEHICLE FILLING:

The retailer/site operator must place **CLEAR USER INSTRUCTIONS AND WARNING NOTICES** (see the following details) for self-service LPG customers in a prominent position at the fuelling point.

If an LPG dispenser is to be located close to other dispensers the warning notices must also be prominent to other vehicle users.

(It is recommended that these notices are also provided in the major languages appropriate to your anticipated customer base).

**LIQUEFIED PETROLEUM GAS
EXTREMELY FLAMMABLE**

SWITCH OFF ENGINE

APPLY HANDBRAKE

NO SMOKING OR NAKED FLAMES

SWITCH OFF MOBILE PHONES

- Shut down the vehicle's engine and any ignition sources on board, e.g. 'pilot lights', apply the handbrake and select the neutral/park gear lever position
- The vehicle operator has a responsibility to examine the tank for soundness and check the periodical re-qualification date marking before connecting the nozzle of the dispenser to the vehicle's LPG tank
- Do not refill damaged LPG tanks or those not within their test certificate life
- Do not smoke or use mobile telephones
- Remove the cap plug from the filler valve of the vehicle's LPG tank
- Check that the dispenser's filling nozzle has a compatible fitting to the vehicle's filler valve. If not, it may be possible to use an adapter which will need to be fixed to the vehicle's filler valve

WARNING – the adapter must ALWAYS be attached to the vehicle's filler valve first. Attempting to attach it to the nozzle will cause the nozzle valve to open causing the release of high-pressure gas with the consequent high risk of COLD BURNS and EXPLOSION or FIRE

- Connect the filling nozzle with swivel clamp to the filler inlet (or adapter). Take care to lay the hose so as not to cause a trip hazard or be liable to be caught by other moving vehicles
- Push the mushroom-type START button on the dispenser
- A "call" signal will now be generated on a remote dispenser controller and when the site operator is satisfied that the fuelling can continue safely, an AUTHORISE command is sent to the dispenser

- The transaction display will reset to 0000's then display the transaction details as flow commences
- If the START/STOP button is released, the flow will stop
- If the START/STOP button is re-pressed within 5 seconds, then the transaction can continue
- If the START/STOP button is NOT re-pressed within 5 seconds, then the transaction will terminate
- Once the dispenser has stopped, the nozzle can be disconnected from the dispenser and the hose replaced in the holster
- Replace cap plug on the vehicle's filler valve

STAFF TRAINING:

Please refer to the references at the end of this manual for guidance on training material

Because of the particular hazards of LPG as indicated above, it is crucial that ALL site personnel are properly trained to deal with:

- LPG gas escape emergency procedure
- immediate first aid for cold burns – until qualified medical personnel arrive

The proper use of appropriate personal protective equipment (PPE) which should be readily available for use by staff at all times

In addition, appropriate staff should be trained to carry out the routine inspection procedure below

Staff should be on the alert at all times for customer misuse of the equipment and ensure improperly stowed nozzles and hoses are attended to without delay

REMEMBER – LPG is potentially highly dangerous – if staff have ANY doubt about the safety of the equipment or leakage of gas, they should follow the emergency procedure immediately – any delay could lead to a major incident and fatalities

ROUTINE INSPECTION PROCEDURE:

EVERY DAY inspection to be carried out by a nominated person who has received the appropriate retaining (this is in addition to any procedures advised by the storage tank and ancillary equipment suppliers):

1. Visually inspect the fuelling nozzle for signs of damage or excessive wear, paying particular attention to the sealing ring
2. Visually inspect the fuelling hose for signs of damage, splitting or cracking of the outer cover, kinking, swellings, etc, paying particular attention to the areas where the hose enters the metal end fittings
3. Check the dispenser for signs of damage and incorrect operation, etc
4. Check for gas leaks – note that ice formation is an indication of a leak at that point
5. Cold Nozzle – if the nozzle is getting particularly cold during dispensing, it is a sign of a gas leak, most likely caused by a damaged or worn nozzle sealing ring. The dispenser should be put out of service until this has been remedied
6. A persistent SMELL of gas should be investigated – see emergency procedures below

In addition, periodically check the dispensers and installation for signs of corrosion, unusual noises, etc

SERVICING:

It is strongly recommended that you arrange for regular inspection and maintenance of the dispensers by a competent service provider

EMERGENCY PROCEDURES:

If a gas leak is suspected (i.e. a persistent strong smell of gas or sound of escaping gas):

- IMMEDIATELY isolate the LPG dispensers and investigate
- If the gas is believed to be spreading into the forecourt area or buildings or the source of the leak cannot be identified or if at all unsure, follow your site's *emergency procedure*

Suggested emergency procedure:

1. Press the EMERGENCY STOP BUTTON (to cut off electrical power to the forecourt and the LPG installation)
2. Call the Fire Brigade
3. Evacuate the site
4. Telephone the emergency call out number of your LPG service provider

This suggested emergency procedure may be varied to satisfy particular site conditions but should be posted in a prominent position to the site operatives

Where a vehicle pulls away whilst still connected to the hose

Should a vehicle pull away whilst still connected to the dispenser hose, the “break-away coupling” in the hose will separate. This will be accompanied by a release of a small amount of liquid LPG, identified by a white gas cloud forming behind the vehicle. The valves in the “break-away coupling” will close to prevent further loss of LPG

You should take the following action:

1. Electrically isolate the LPG dispenser immediately
2. Check that the hose valve at the dispenser has sealed – if LPG continues to escape, follow the gas leak emergency procedure
3. Inform the site manager
4. Attempt to retrieve the hose from the vehicle
5. Note the vehicle’s registration number, ask the driver for the name and address of his insurance company and advise that a claim may be made against his insurance for a replacement hose in the event that it has been damaged
6. Contact your LPG service provider with regard to checking the hose and connections for damage prior to re-connection of the “break-away coupling”

WARNING – *on no account should untrained personnel attempt to re-connect a “break-away coupling”*

HYDRAULIC SERVICE - GAS COMPONENTS:

WARNING:

- This equipment is designed to dispense liquefied petroleum gas to motor vehicles
- It contains flammable liquefied gas under pressure
- It must ONLY be serviced by persons fully trained and experienced in the safe handling of LPG in accordance with all statutory regulations and recognised industry safety standards
- Failure to do so may result in (but not limited to) the escape of flammable liquid or vapour which may cause COLD BURNS in contact with exposed flesh and is LIKELY to cause a fire or an explosion should it come into contact with a source of ignition
- Sudden uncontrolled depressurising may also result in the propulsion of components at high velocity
- Contact Premier Autogas Limited for advice on authorised service providers