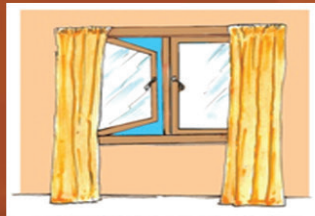


# National School Nutrition Programme

# Gas Safety in Schools



**basic education**

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA



## Purpose of this publication

As we strive to improve the quality of meals in the National School Nutrition Programme (NSNP), there is a need to maintain the relevant standards on safety. This NSNP Gas Safety Booklet was developed to assist schools in preparing meals in a safe way where gas is used as cooking fuel.

The booklet is intended for officials and Volunteer Food Handlers in schools, and officials in districts and Provincial Education Departments. It can be used when monitoring to assess whether schools adhere to safety standards, so that corrective measures can be taken to ensure gas safety in schools.

The booklet provides information on how to utilise gas and the correct installation of gas cylinders and three burner plates for preparation of NSNP meals in schools.



Gas cylinder



Three burner plates used in most schools to prepare meals

## Table of Contents

1. Introduction.....	3
2. Working with LP Gas requires legal compliance for safety in the workplace .....	3
3. What is LP Gas? .....	3
4. Gas cylinders.....	4
5. Why can working with gas be dangerous?.....	4
6. Gas equipment installation .....	5
7. Connection, Storage and Maintenance .....	6
7.1 Check the connections .....	6
8. Precautions and safety measures when cooking with gas.....	7-8
9. Working with Gas .....	9
10. Storage of the gas cylinder.....	10
11. Do's and Dont's when cooking with gas .....	11
12. Conclusion.....	12
13. Provincial contact numbers for gas inquiries.....	12

## 1. Introduction

The cooking fuel used by the National School Nutrition Programme (NSNP) is mainly gas. Safe installation and use thereof is thus of utmost importance.

One must not take it for granted that gas cookers and gas fire places are safe. Gas connections must be checked regularly and not only when there is a problem with an appliance.

## 2. Working with LP Gas requires legal compliance for safety in the work place



### Please take note

It is mandatory for all appliances falling within the Safe Appliance Scheme to comply with the requirement of specifications and mandatory aspects detailed within the Occupational Health and Safety Act of 1993.

The Department of Labour appointed the Liquefied Petroleum Gas Safety Association of Southern Africa (LPGSASA) to verify whether LP Gas appliances, regulators and hoses are compliant with Safe Appliance Scheme.

There is a National Standard published by the South African Bureau of Standards (SABS) covering the Safety requirements of LP Gas appliances. The Standard number is SANS 1539. The title is 'Appliances operating on liquefied petroleum gas – safety aspects'. SANS 1539 is the only safety standard to which LP Gas appliances must comply. The safety standard must be stamped onto the cylinder.

## 3. What is LP Gas?

*LP Gas* stands for Liquefied Petroleum Gas, which is energy in a cylinder. It is flexible, fast, clean, portable and powerful. It is safely used in a wide range of applications like cooking, heating, refrigeration and lighting. LP gas is the main fuel used for cooking in the NSNP.

#### 4. Gas cylinders

Cylinder gas is available in a wide range of cylinders to fit a variety of appliances. The nearest dealer can refill cylinder sizes up to 6kg. With the larger sizes – 9kg and bigger, your cylinder will be replaced by the dealer with a full one when required. A dealer, who is a member of the LP GAS Safety Association, should fill LP Gas cylinders.

Gas cylinders used in the NSNP range from 19kg to 48kg. By law it is stipulated that one 19kg cylinder is allowed indoors. Bigger cylinders **must** be stored outside. For safety purposes, a lockable steel cage is recommended with appropriate signage indicating that gas can be hazardous.

#### 5. Why can working with gas be dangerous?

Working with gas can be deadly. Badly fitted and poorly serviced appliances can cause the following gas safety risks:

- gas leaks
- fires
- explosions
- carbon monoxide poisoning
- lack of adequate ventilation leading to suffocation



Please note: Only registered installer may undertake LP Gas

## 6. Gas equipment installation

- Always use a registered service provider to install, repair and service your gas appliances. On completion of the work, a Certificate of Compliance should be provided confirming that the job has been done according to SABS standards.
- Check appliances thoroughly before using them, especially after returning to school after a holiday period. There are seals that can degrade with time. Make sure the appliance is safe before using it by checking the manufacturer's instructions or alternatively, getting a registered service provider to check. Always follow the instructions when connecting and disconnecting appliances from gas cylinders. The registered service provider will carry out tests and checks to establish if appliances are operating safely.
- The gas equipment must be handled, repaired, inspected, or tested in compliance with relevant standards.
- It is mandatory for appliances, hoses and regulators to be tested for compliance and for the manufacturers or importers of such products to obtain a Verification Permit from the LPGSASA.
- LP Gas installers are required by law to be registered.
- If there is suspicion that a person is not registered and is working illegally, this should be reported either at the Department of Labour or the South African Qualification and Certification Committee for Gas (SAQCCG). Alternatively contact LPGSASA. A list of contact numbers is provided in the last section of this publication.

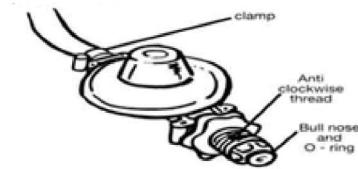
**Remember:** When procuring gas equipment, provinces, districts and schools should ensure that all appliances have a Certificate of Compliance

## 7. Connection, Storage and Maintenance

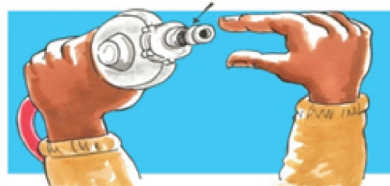
- Gas cylinders should be handled by accredited service providers.
- The cooker/cylinder must be checked regularly.
- Newly purchased gas stoves should always have a certificate of compliance.
- The hand wheel on most regulators connects to the cooker in an anti-clockwise direction when screwing into the cylinder.
- All stoves and boiling tables used in schools connect to the cylinders using a regulator.

### 7.1 Check the connection

#### The Regulator



- At the front of the regulator where it screws into the cylinder, is an “O” ring or shaped rubber seal. Check this regularly and replace if necessary.
- Check the hose (not a garden hose) between the regulator and the stove (boiling table). It must be secured with a small metal hose clamp at both ends.
- Check all the rubber seals (washers) and “O” rings and replace them regularly.



- Check all clamps and hose connections regularly.
- Check the hose for cracks, wear and damage. If the connecting hose is worn out, it must be replaced.



## 8. Precautions and safety measures when cooking with gas

### Measures for using gas in the food preparation area



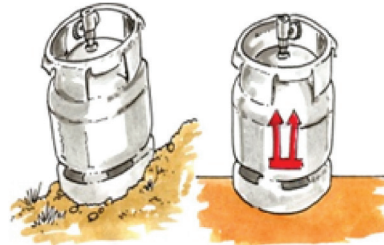
Always make sure your window is open to allow fresh air into the room



Gas cylinders bigger than 19kg must be stored outside, preferably in a lockable steel cage



A fire extinguisher must be available

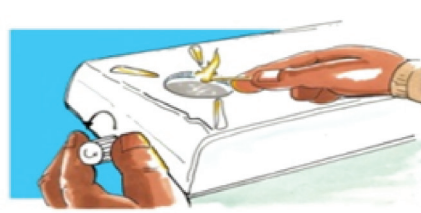


Place your cylinder on a level surface

### Lighting gas



Light the match first, THEN



Turn on the gas to ignite the burners

## Checking for leaking



**Never check for a leak using a flame!**

Take a cup of soapy water and a small paint brush and brush around all connections between the stove (boiling table) and the cylinder. If you see bubbles form on them, then you have found the leak.

- If there is a leak, **close the cylinder valve**.
- Never try to repair a leaking cylinder yourself. It should only be checked by an accredited service provider.

## 9. Working with Gas



- If you smell gas, turn off the cylinder.
- Immediately put out all smoking material and other flames.
- If there are flames, protect your hands with a damp cloth.
- Immediately leave the area and call your local fire department.
- Before you restart the appliance, have a qualified gas installer inspect your cylinder and appliance.
- Remove the faulty cylinder.



Remove the  
faulty cylinder

## 10. Storage of the gas cylinder










- Never store your gas cylinder near a direct source of heat (such as stove, heater, fire).
- Cylinders in any public place such as a school **must be stored outside the kitchen in a steel cage**. Clear safety signage must be visible on the cages.



Store gas cylinders in  
lockable steel cages with  
clear safety signage

Always allow enough time for your appliance  
to cool down, after use, before touching it or  
storing it away

## 11. Do's and Dont's when cooking with gas

<b>NATIONAL SCHOOL NUTRITION PROGRAMME</b> <b>GAS SAFETY</b>			
✓ – DOs		X – DO NOTs	
 Always ensure that the window is open to allow fresh air into the room	✓	 Do not place the gas cylinder in the walking path as it may cause accidents	X
 Light the match first, THEN turn on the gas to ignite the burners 	✓	 Do not store more than one 19kg gas cylinder inside a room	X
 Ensure that there is a fire extinguisher in the kitchen	✓	 Do not keep flammable articles close to the stove – keep the kitchen clean	X
 Store gas cylinders outside in safety steel cages with safety signage	✓	 Do not use faulty equipment	X

## 12. Conclusion

Schools are encouraged to be familiar with the health and safety requirements of working with gas. The following website will clarify and answer most questions relating to gas [www.lpgas.co.za](http://www.lpgas.co.za). The contact details of LP Gas offices in the country are provided below.

## 13. Contact numbers for gas inquiries

LPGSASA		+27 (11) 886 9702
Department of Labour	Head office	(012) 309 4000
	Eastern Cape	(043) 701 3128
	Free State	(051) 505 6200
	Gauteng	(011) 853 0300
	KwaZulu Natal	(031) 366 2000
	Limpopo	(015) 290 1744
	Mpumalanga	(013) 655 8700
	North West	(018) 387 8100
	Northern Cape	(053) 838 1500
	Western Cape	(021) 441 8000
		
Each school coordinator is required to obtain the nearest registered gas installer and supplier's number to report any problems with gas usage		





# Gas Safety in Schools

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