

**L**igtas na  
**P**aggamit ng  
**G**as (LPG)



**“SAFE LPG PROJECT”**



# What is LPG?

LPG stands for Liquefied Petroleum Gas, either propane or butane or a mixture of both. These gases occur naturally in crude petroleum or natural gas.

In the Philippines, LPG is essentially a mixture of **60% butane** and **40% propane**.

It is the only petroleum product that can exist as liquid and gas at the same time





# Sources

## 1. Field Gas

- Associated Gas (w/ crude petroleum)
- Unassociated Gas (mixed w/ natural gas)

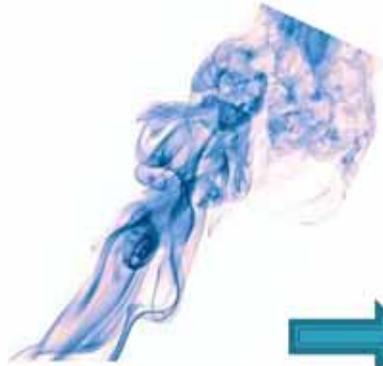
## 2. Refinery Gas

The result of processing crude oil by distillation, in the same manner that other liquid fuels, such as kerosene, gasoline and diesel, are extracted.





# Characteristics



LPG is **NOT** poisonous





# Characteristics

➔ **LPG** dissolves natural rubber.





# Characteristics

➔ LPG is environment friendly.





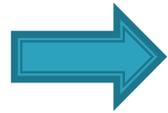
# Characteristics

➔ PURE LPG IS COLORLESS





## Characteristics



**PURE LPG IS ODORLESS**

- ❑ As LPG evaporates, it looks like steam, but quickly becomes invisible
- ❑ Pure LPG has **NO SMELL**. For safety purposes, **ETHYL MERCAPTAN** is added so any leaks can be detected by scent

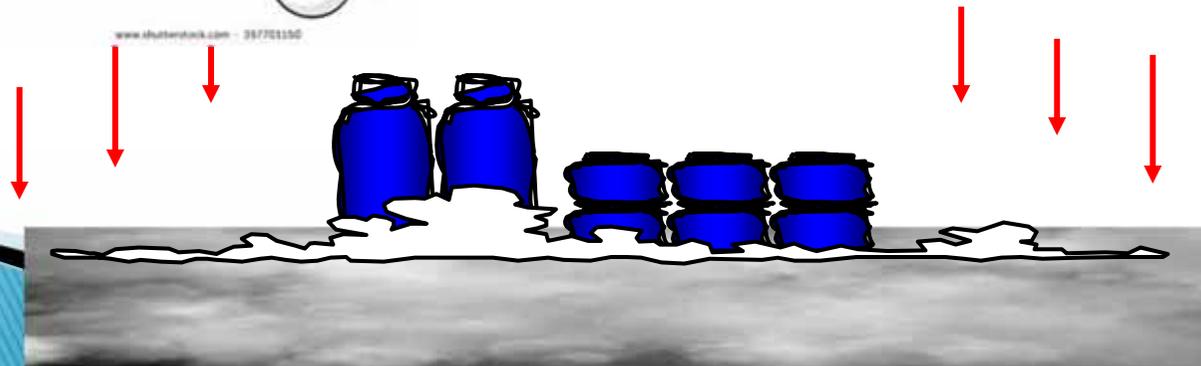




# Characteristics

➔ LPG VAPOR is **HEAVIER** than AIR

**LPG vapor**, when release to the atmosphere is heavier than air. LPG vapor will then tend to deposit itself on the lowest portion in the area.





# LPG Fire Incident

Malibay, Pasay City - 12 Aug 2006 at about 7:48 P.M., a fire gutted three residential houses in the area that killed 5 members of dela Pena family and injured other 3 and left nine (9) families homeless.





# LPG Fire Incident

THE PHILIPPINE STAR 8/27

**Metro**  
Editor: ROMEL A. LARA

SATU

## Tenant killed, 3 firemen injured in condo blaze

A 58-year-old woman was killed while three firemen were hurt when fire caused by an exploding LPG tank hit a four-storey, condo-type public housing building in Mandaluyong City the other night.

At least 14 families were

He said the bedridden Francisco was left behind in the panic and confusion.

"Her neighbors said they forgot all about her," Caya pointed out.

Carrying oxygen tanks and other protective gear, the Mandaluyong firemen rushed to the fourth floor in an attempt to rescue Francisco, but it was too late.

The three firemen sustained injuries while battling the blaze for four hours.

The entire fourth floor of the condominium building was destroyed, but the lower floors were not damaged.

The fire reached the highest alarm, or Task Force Bravo, and was put under control at 1:12 a.m.



Firemen carry the body of Adier burning room at the Sam Barangay Barangka Itaas, Ma





# LPG Fire Incident



The 2013 Serendra explosion was an explosion that occurred in the Two Serendra condominium complex occurred in Taguig City, Metro Manila, Philippines. The explosion killed at least 3 people and another 5 were injured in the area





# LPG Fire Incident



LPG Refilling Station  
blast in Pasig City due  
to LPG leak on January  
11, 2017 that killed 4  
and 21 severely  
injured





# LPG Fire Incident



A man was injured in a fire that was caused by a Liquefied Petroleum Gas explosion in Sampaloc, Manila before dawn yesterday of March 3, 2019. The victim suffered third-degree burns.





# Consumer Tips

**Genuine**

VS

**Fake**





# Consumer Tips



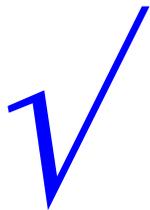
Look for an appropriate weighing scale to determine net content





# Consumer Tips

→ Be sure that the cylinder is in good condition.





# Consumer Tips

➔ Buy LPG cylinders with PROPER MARKINGS  
e.g. Tare Weight (TW), Brand Name and others

## DATA PLATE

- Manufacturer's registered trade name or brand name, trademark and business name
- Name & address of the importer in the Philippines (for imported cylinders)
- Specific standard used (e.g. PNS 03-1:2000)
- Date tested (hydrostatic, leak, mechanical, etc..)
- Thickness of the plate, in mm.
- Water Capacity, in liters
- Tare Weight, in kg.
- Design and test pressure, in MPa
- Serial number or code number
- Made in the Philippines, or country of manufacture if imported



Tare Weight (TW)



Brand Name





# Consumer Tips

- ⇒ Check if the security seal is intact and firmly affixed to the valve.



*The brand name/logo in the cylinder and the seal must be the same*





# Consumer Tips

- Determine the gross weight of LPG in filled cylinders by adding the Tare Weight (T.W.) and net weight of 11.0 kgs.



$$\begin{array}{r} 12.3 \\ + 11.0 \\ \hline \end{array}$$

Gross weight **23.3**





## Sample Computation on How to determine the content inside the cylinder

**(Actual Weight – T.W. = Content)**



Actual Weight  $\longrightarrow$  22.5

T.W.  $\longrightarrow$  11.5

CONTENT  $\longrightarrow$  11.0

More than negative 300g is considered underfilled



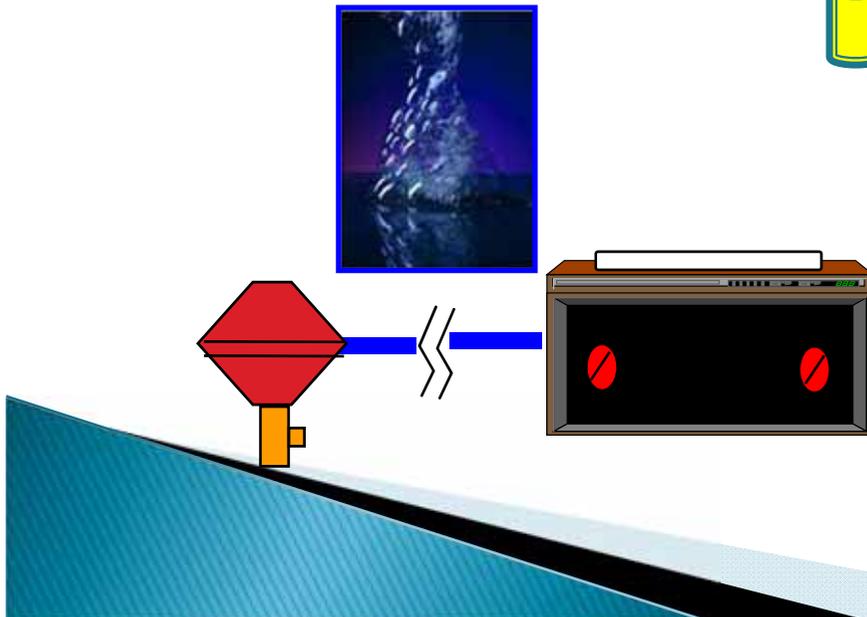


# Safety Tips

 Do not invert LPG cylinders or let it lie down. LPG cylinders should always be in upright position



 Use only LPG resistant rubber hoses with clamps and regularly check for wear, cracks and leaks using soap and water

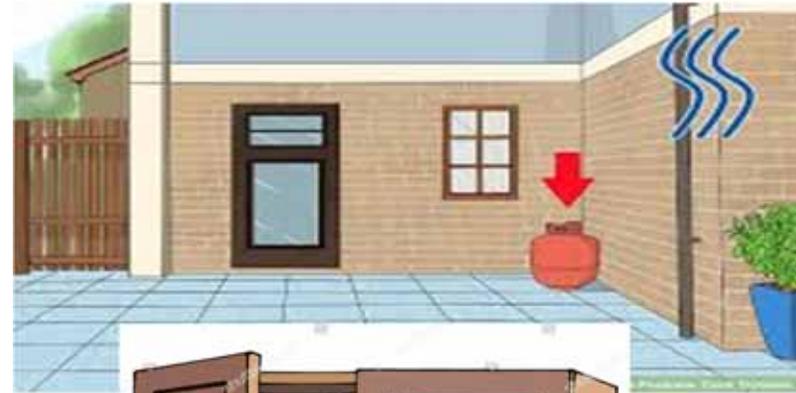




# Safety Tips



Do not store LPG cylinder in enclosed kitchen cabinets



Keep LPG cylinders away from electrical points and other sources of fire/ignition





# Safety Tips



Do not tamper or repair LPG cylinders with yourself, call an authorized person to do so

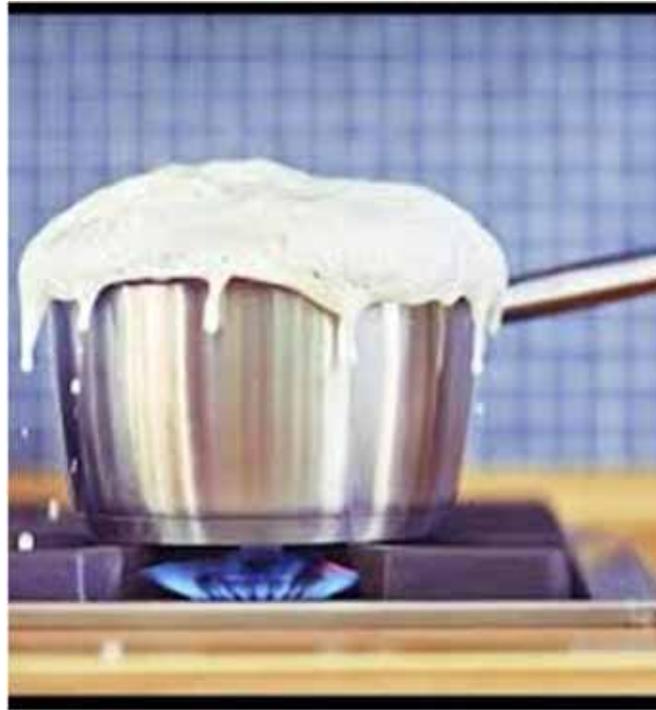


Never use match or flame when checking for leaks





# Safety Tips



-  Never leave your cooking unattended. The cooking vessel could overflow and extinguish the burners, causing gas to leak.





# Safety Tips

-  Use only LPG-resistant hose in your stove
-  Replace any hose that is damaged or shows signs of wear, stiffness, soft spots or cracking.





# Safety Tips

-  Periodically check connections for leaks particularly in regulator and cylinder with soapy water.





# Consumer Tipid Tips



Prepare the  
needed ingredients and  
condiments to be  
cooked before  
lighting up your  
gas stove or  
range





# Consumer Tipid Tips



The gas burner must be clean, free from dirt and other impurities





# Consumer Tipid Tips



Match the size of pots/pans to the size of the burner





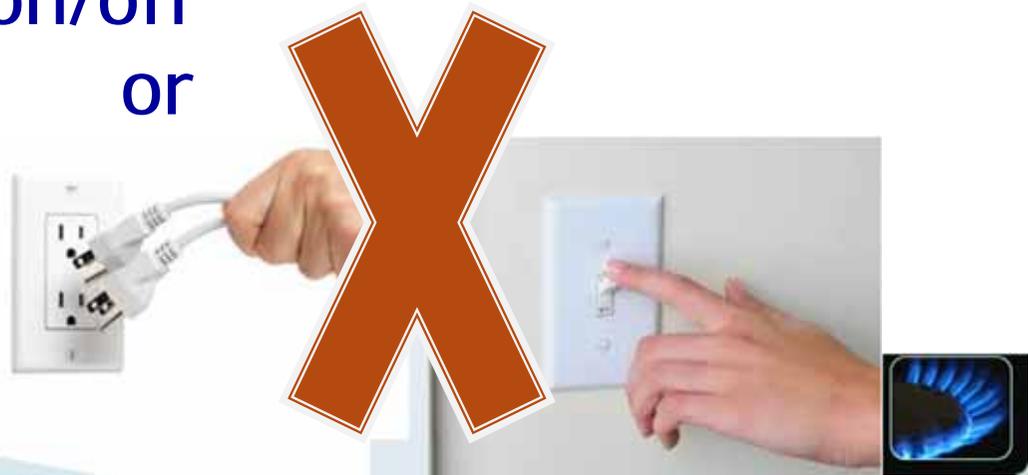
# IMPORTANT REMINDER

## IF YOU SMELL GAS IN YOUR KITCHEN:



- Open all doors and windows to improve ventilation.

- Do not switch on/off electrical switches or connect/disconnect electrical plugs.





# IMPORTANT REMINDER

- In case of leak, switched off regulator and move cylinder out to open and ventilated place.
- Seek help from retail outlet where LPG was purchased or call the proper authorities





# IMPORTANT REMINDER

The Department of Energy (DOE) warned household consumers to be wary of Liquefied Petroleum Gas (LPG) anti-leakage devices that are being sold house-to-house.

Besides the lack of proof that anti-leakage devices actually prevent LPG leaks, using this device in households may encourage consumers to disregard basic safety practices





# IMPORTANT REMINDER

The **so-called LPG anti-leak device** is actually a mechanically operated gadget technically termed "**excess flow limiter**". A steel ball automatically blocks off the passage of gas when there is a sudden surge thru the regulator, about 40% to 50% of the normal flow. It does not activate in the presence of pinholes and small cracks on your LPG hose.

The use of this device on household installation can even result in complete disregard for the most basic and simplest safety practices.





*“A well-informed and  
vigilant consumer is the  
best-protected  
consumer.”*





# **Maraming Salamat Po!**

**For further inquiries, please contact us at telephone numbers**

**840-2130 & 840-5669**

**Retail Market Monitoring and Special Concerns Division**

**Oil Industry Management Bureau**

