

## Hazards associated with using LPG:

### Art metal: Industrial Technology

In this activity you will learn about the safe use of LPG.

This material addresses aspects of the following syllabus outcomes:

- 4.1.1 A student identifies and applies fundamental OH&S principles when working with materials tools and machines.
- 5.1.1 A student identifies, assesses and manages the risks and OH&S issues associated with the use of a range of materials, hand tools, machine tools and processes.

*Extract from: Years 7–10 Industrial Technology Syllabus © Board of Studies NSW 2003.*

### Potential hazards in the work environment

Liquefied petroleum gas (LPG) is a flammable gas that has a number of applications for common art metalwork processes. This gas has the potential to create a hazard. Therefore it is important that the properties and safe handling of LPG are understood.

#### Activity 1: Hazards associated with LPG

Examine the information in relation to the safe handling and use of LPG on the following web site <[http://www.e-lpg.com/liquefied\\_petroleum\\_gas\\_safety.asp](http://www.e-lpg.com/liquefied_petroleum_gas_safety.asp)> and complete the following passage using the words from the word bank.

liquid	heavier	gas	cooling	seen
expansion	ice	pressure	downwards	sealed

Liquefied petroleum gas is stored under \_\_\_\_\_. The gas will leak from any joint or connection that is not \_\_\_\_\_ properly.

Liquefied petroleum gas is \_\_\_\_\_ than air. Any significant leak will move \_\_\_\_\_ and stay on the ground. Since LPG is stored in two phases, liquid and gaseous, there is potential for either a \_\_\_\_\_ leak or a \_\_\_\_\_ leak. If the liquefied petroleum gas leak is a gas leak it may not be \_\_\_\_\_ (because LPG is colourless), except where the leak is of sufficient size to be seen shimmering in the air. When a liquid liquefied petroleum gas leak occurs, the gas release will be seen as a patch of \_\_\_\_\_ around the area of the leak, or as a jet of white liquid. This white appearance is due to the \_\_\_\_\_ effect created by the rapid \_\_\_\_\_ of the LPG liquid into a gas.



**Activity 2: Safety rules for using LPG**

Complete the following points using the words from the word bank.

replace	contact	soapy	upright
water	never	close	

1. Always \_\_\_\_\_ the LPG cylinder or tank valves after use.
2. \_\_\_\_\_ check for gas leaks using a lit match.
3. Always use a solution of \_\_\_\_\_ water and look for bubbles coming from around valves and pipe joints.
4. \_\_\_\_\_ any damaged or worn hose with a new hose.
5. Stand the cylinder \_\_\_\_\_.
6. Ensure that any hose connection does not come into \_\_\_\_\_ with or near the heat source.