

Types of Domestic Fuel Gases and Their Properties

In Hong Kong, town gas is produced from naphtha and natural gas. Its major components are nitrogen, methane, carbon dioxide and a small amount of carbon monoxide. Its calorific value is about 17.27 MJ/m³ and its flammable limits are approximately 4.5 ~ 44.3%. The Wobbe Index of town gas is 24. It is colourless, odourless, flammable, explosive and toxic. As town gas is lighter than air (weights approximately 0.52 times the weight of air), it can dissipate in the air easily. For safety reasons, town gas has a special odour added to help detect leaks. Town gas is produced at two production plants: the Tai Po Plant and the Ma Tau Kok Plant. It is supplied to users through a network of pipelines. Various pressure-regulating facilities are set up in the gas supply network to ensure a stable supply of town gas and steady gas pressure. Real-time monitoring of the Hong Kong gas supply network is facilitated by remote monitoring technology. (Source: The Hong Kong and China Gas Company Limited)

LPG is the abbreviation of "liquefied petroleum gas". It is a mixture of propane and butane. The calorific value of domestic LPG is about 116 MJ/m³ and its flammable limits are approximately 1.8 ~ 9.5%. The Wobbe Index of LPG is 84. LPG is colourless, odourless, non-toxic, flammable, explosive and heavier than air. As it is approximately 1.91 times the weight of air, it tends to accumulate on the ground level. For safety reasons, LPG has a special odour added to help detect leaks. Apart from being centrally supplied through a network of pipelines, LPG can be stored in liquid form in a cylinder. The LPG used in Hong Kong is imported from overseas and stored in LPG storage compounds. It is subsequently supplied to LPG users and LPG filling stations.

(Source: The Electrical and Mechanical Services Department)

	Town Gas	Liquefied Petroleum Gas
	Feedstocks: Naphtha and natural gas	
Materials / Components	Constituents: hydrogen, methane, carbon dioxide, and a small amount of carbon monoxide, nitrogen and oxygen	Propane and butane
Calorific Value (MJ/m³)	17.27	116
Flammable Limits	4.5 ~ 44.3%	1.8 ~ 9.5%
Wobbe Index	24	84
Toxicity	Toxic	Non-toxic
Weight	0.52 times the weight of air	1.91 times the weight of air
Supply Method	It is supplied through a network of pipelines.	It is centrally supplied through a network of pipelines or stored in a cylinder in liquid form.