

# Petrol

## General information

### Key Points

#### Fire

- Highly flammable
- Mixtures of petrol vapour and air may explode
- In the event of a fire involving petrol, use normal foam and normal fire kit with breathing apparatus

#### Health

- Serious lung injury may occur if droplets of petrol are inhaled (e.g. if vomiting occurs after ingestion)
- Harmful
- Inhalation may cause headache, dizziness and drowsiness.
- Often no symptoms occur following ingestion. In some cases, sickness and diarrhoea may occur
- Petrol vapour may be irritating to the eyes and lungs
- Prolonged skin exposure to petrol may cause a variety of skin conditions
- Long-term exposure to high levels of petrol is associated with a range of disorders affecting the nervous system
- Petrol does not affect human reproduction or development
- There is currently no evidence that petrol causes cancer in humans

#### Environment

- Avoid release into the environment
- Inform the Environment Agency of substantial releases

## Background

Petrol is a complex mixture of chemicals and is manufactured by blending different products obtained from the distillation of crude oil with performance-enhancing chemicals.

'Petrol' was first used as a product name by a London chemical company (Carless, Capel & Leonard) at the end of the nineteenth century. The term 'Petrol' is an abbreviation of 'petroleum', derived from the Greek words 'petros' (meaning 'rock' or 'stone') and 'oleum' ('oil'). Petrol has also been sold as 'motor spirit', 'petroleum spirit', 'mogas' and 'gasoline' (often shortened to 'gas').



Nearly 50 thousand litres (11 thousand gallons) of petrol are used every hour in the UK.

Petrol is not particularly toxic and accidental poisoning is very rare. However, if petrol is swallowed, medical advice should be obtained immediately as there is a risk of lung damage if vomiting occurs resulting in droplets of petrol being inhaled.

## Production and Uses

### Key Points

- Petrol is produced by mixing fractions of crude oil distillates (petrochemicals) with various, brand-specific additives.
- Approximately 26 thousand million litres (6 thousand million gallons) of petrol were sold in the UK in 2005, equating to 820 litres (180 gallons) per second.

Petrol is produced at refineries by blending different fractions of crude oil distillates with various brand-specific additives and is used as a fuel for motor vehicles.

The quantity of petrol released by HM Revenue and Customs for consumption in the UK in 2005 was approximately 26 thousand million litres (6 thousand million gallons), the majority (>99%) of which was “ultra-low sulphur petrol” for automotive engines. Petrol has also been used historically as a solvent in paints, for cleaning metal surfaces (degreasing) and in the treatment of head lice (during the late Victorian era).

## Frequently Asked Questions

### *What is petrol?*

Petrol is a complex mixture of hydrocarbons produced by mixing fractions obtained from the distillation of crude oil with brand-specific additives to improve performance. Under normal conditions, it is a volatile liquid with a characteristic odour.

### *What is petrol used for?*

In the UK, petrol is mainly used as a fuel for light road vehicles (cars, motorbikes and small vans) and small appliances (lawnmowers, cement mixers, etc.). In smaller (“two-stroke”) engines, petrol is mixed with oil to produce a fuel mixture that reduces engine wear.

### *How does petrol get into the environment?*

Substantial quantities of petrol are found in the environment only as a result of accidental release from an industrial site or transport vehicle. There are no natural sources of petrol. Vehicle engines may emit a very small amount of un-burnt petrol in exhaust fumes.

### *If there is petrol in the environment will I have any adverse health effects?*

The presence of petrol in the environment does not always lead to exposure. Clearly, in order for it to cause any adverse health effects you must come into contact with it. You may be exposed by breathing, eating, or drinking the substance or by skin contact. Following exposure to any chemical, the adverse health effects you may encounter depend on several factors, including the amount to which you are exposed (dose), the way you are exposed, the duration of exposure, the form of the chemical and if you were exposed to any other chemicals.

A short, one-off exposure to petrol vapour will not normally cause any long-term health effects. Breathing large quantities of petrol vapour may cause signs of drunkenness, such as dizziness, unsteadiness and slurred speech. Drinking petrol may cause non-specific signs and symptoms of poisoning such as dizziness, headache and vomiting. A severe form of lung damage called pneumonitis (pronounced ‘new-mown-eye-tus’) may occur if liquid petrol is inhaled directly onto the lungs, for example, whilst manually siphoning a tank or from inhaling vomit after swallowing petrol. This is why it is important not to make someone sick if they have swallowed petrol and to seek immediate medical advice.

### *Can petrol cause cancer?*

Petrol is classified by the International Agency for Research on Cancer (IARC) as being a possible carcinogen (cancer-causing chemical) mainly on the basis of long-term animal studies. However, there is not thought to be any risk of cancer from short-term, occasional exposures.

### *Can petrol affect or damage the unborn child?*

There is no evidence to suggest that exposure of a mother to petrol may harm the unborn child. However, as with all chemicals, it is obviously best to avoid unnecessary contact.

### *What should I do if I am exposed to petrol?*

You should remove yourself from the source of exposure.

If you have ingested petrol do not make yourself sick. If you have ingested a small amount of petrol and you do not have any symptoms (choking, coughing, vomiting) you should be observed at home under supervision for 6 hours. If you do develop any symptoms you should attend hospital.

If you have inhaled petrol you should seek medical advice.

If you have got petrol on your skin, remove soiled clothing, wash the affected area with lukewarm water and soap for at least 10 – 15 minutes and seek medical advice.

If you have got petrol in your eyes, remove contact lenses, irrigate the affected eye with lukewarm water for at least 10 – 15 minutes and seek medical advice.

This document will be reviewed not later than 3 years or sooner if substantive evidence becomes available.