



# Kerosene

## General Information

### Key Points

- kerosene is a liquid fuel, obtained from the distillation of crude oil
- in the UK it is also called paraffin or home heating oil
- it is a major component of the fuel used in planes
- kerosene is not found naturally in the environment
- exposure may occur at work, through accidents or misuse of domestic products
- breathing kerosene vapour or drinking kerosene-based liquids may cause dizziness, headache and vomiting
- repeated skin exposure may result in rashes
- lung damage may occur if kerosene enters the lungs after being swallowed

## Public Health Questions

### What is kerosene?

Kerosene is a liquid mixture of hydrocarbons (chain length C9 – 16) produced by the distillation of crude oil. The (UK) technical term for kerosene is “C2 Fuel Oil”, as it is derived from the “kerosene” fraction of distilled crude oil. However it is more commonly referred to as paraffin and home heating oil

It is important to note that kerosene is not a synonym for “jet fuels” (which are a distinct class of petroleum distillate product containing a range of chemical additives). However, kerosene can be regarded as essentially the same as USA JP8 jet fuel, without the various chemical additives. Kerosene is also regarded as the same as domestic heating oil.

### What is kerosene used for?

It is a major component (> 60%) of aviation (jet) fuels and has been used to control mosquito larvae. Kerosene is also used as a solvent (for example in cleaners, pesticides and paints), degreaser and domestic heating oil. A deodorised form of kerosene (Deobase™) is sometimes used in domestic products.

### How does kerosene get into the environment?

There are no natural sources of kerosene, it may be found in the environment only as a result of its accidental release from domestic dwellings, businesses or industry.

### How might I be exposed to kerosene?

Exposure to kerosene may occur in workplaces in which it is used, such as the petrochemical and aviation industries. However safe levels are enforced to protect employees who may be exposed to kerosene at work. Such levels are below those that are thought to cause harmful effects.

Exposure may occur through use or misuse of commercially available products such as paints, insecticides and domestic fuel or following accidental releases. If kerosene enters drinking water (e.g. following an accidental spill) some components of the fuel may be ingested.

### If I am exposed to kerosene how might it affect my health?

The presence of kerosene in the environment does not always lead to exposure. In order for it to cause any adverse health effects you must come into contact with it. You may be exposed to kerosene by breathing it's fumes, drinking it or by skin contact with it. 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.

Drinking kerosene may lead to nausea, vomiting and abdominal pain. In serious cases damage to the digestive tract, coma, loss of muscle control, and heart and lung problems can occur. A severe form of lung damage called pneumonitis may occur if liquid kerosene is inhaled directly into the lungs, for example, whilst manually siphoning a tank or from inhaling vomit after swallowing kerosene. This is why it is important not to make someone sick if they have swallowed kerosene.

Breathing in kerosene fumes (not vehicle exhaust) may cause dizziness, drowsiness headaches. Breathing in large amounts can result in coma, loss of muscle control, heart and lung problems. Kerosene can cause the skin to become irritated, dry and cracked; if the skin is exposed for a long time then burns may develop. Dermatitis (eczema) can develop if exposure to the skin happens often.

Kerosene is highly flammable; it and its fumes may cause fire or explosions if not handled appropriately.

### Can kerosene cause cancer?

The International Agency for Research on Cancer (IARC) found that there was not enough evidence as to whether distillate (light) fuel oils which include kerosene can cause cancer.

### Does kerosene affect pregnancy or the unborn child?

There is limited data on the effects of kerosene exposure during pregnancy. However, exposure to kerosene at concentrations that do not harm the mother are unlikely affect the health of the unborn child.

### How might kerosene affect children?

Kerosene would be expected to affect children in the same way as adults. Kerosene and products which contain it which are stored at home should be stored in an appropriate container out of the reach of children.

### What should I do if I am exposed to kerosene?

You should remove yourself from the source of exposure.

If you have ingested kerosene seek medical advice. Do **not** make yourself sick.

If you have inhaled kerosene you should seek medical advice.

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

## Additional sources of information

NHS Choices – Poisoning: <http://www.nhs.uk/Conditions/Poisoning/Pages/Introduction.aspx>

GOV.UK – Storing oil at your home or business: <https://www.gov.uk/oil-storage-regulations-and-safety/overview>

UKTIS. Best Use of Medicines in Pregnancy <http://www.medicinesinpregnancy.org/>

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