White spirit

General Information

Key Points

- also known as stoddard solvent, turpentine substitute and mineral spirit
- flammable, clear, colourless liquid
- may be released into the environment during its production and use; used in various household products
- general public may be exposed to very small amounts of white spirit due to its use in various consumer products e.g. paints and varnishes
- ingestion causes stomach upset and abdominal pain; in severe cases drowsiness, lack of coordination, fitting, heart problems and coma may occur
- severe lung damage can occur if liquid white spirit is inhaled directly into the lungs
- inhalation may cause irritation of the nose, throat and lungs, shortness of breath, stomach upset, dizziness, headache, lack of coordination and drowsiness
- skin contact causes irritation, drying and cracking; prolonged contact can cause redness, blistering and burns to the skin
- eye exposure may cause an immediate stinging and burning sensation and tearing
Public Health Questions

What is white spirit?
White spirit is a flammable, clear, colourless liquid. It is a mixture of chemicals known as petroleum hydrocarbons. Other common names for white spirit are Stoddard solvent, turpentine substitute, mineral spirit and paint thinner.

What is white spirit used for?
White spirit is used in paints, coatings, waxes, varnishes, adhesives, printing inks and liquid photocopier toners. In industry it is also used as a solvent for, cleaning, degreasing and substance extraction. In households, white spirit is commonly used to clean paint brushes or thin paint.

How does white spirit get into the environment?
White spirit may be released into the environment during its production, transport and use.

How might I be exposed to white spirit?
The general population may be exposed to white spirit due to its use in various consumer products e.g. paints and varnishes, although such levels in these sources are unlikely to cause harm if the product is used correctly. Exposure may also occur in an occupational setting where white spirit is produced or used. However, safe limits are enforced to protect the employees; such levels are below those that are thought to cause harmful effects.

If I am exposed to white spirit how might it affect my health?
The presence of white spirit 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 white spirit by breathing 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.

Ingestion of white spirit can cause can cause stomach upset and abdominal pain. In severe cases white spirit may be absorbed into the body causing drowsiness, lack of coordination, fitting, heart problems and coma. Severe lung damage called pneumonitis can occur if liquid white spirit is inhaled directly into the lungs, for example, from inhaling vomit after swallowing white spirit.

Breathing in white spirit vapours may cause irritation of the nose, throat and lungs, shortness of breath, stomach upset, dizziness, headache, lack of coordination and drowsiness. Exposure to very high concentrations via inhalation may cause symptoms similar to those seen following ingestion.
Skin contact with white spirit causes irritation, drying and cracking. Prolonged contact can cause redness, blistering and burns. Dermatitis can develop following repeated exposure. Eye exposure may cause an immediate stinging and burning sensation and tearing.

**Can white spirit cause cancer?**

Due to lack of human data and the limited data in animals, it is not known whether white spirit causes cancer therefore the International Agency for Research on Cancer (IARC) considered it as being not classifiable.

**Does white spirit affect pregnancy or the unborn child?**

Due to lack of data it is not possible to assess the reproductive and developmental effects of white spirit. It is unlikely that exposure to low concentrations of white spirit which do not affect the mother would result in harm to the unborn child.

**How might white spirit affect children?**

Children exposed to white spirit would be expected to display similar symptoms to those seen in exposed adults. White spirit stored around the home should be kept out of the reach of children and in an appropriate container.

**What should I do if I am exposed to white spirit?**

Low level exposure from the correct use of products that contain phenol would not be expected to cause any adverse health effects.

Please see below for advice following accidental exposure to phenol.

You should remove yourself from the source of exposure.

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

If you have inhaled white spirit you should seek medical advice.

If you have got white spirit on your skin, remove soiled clothing (not above the head), wash the affected area with lukewarm water and soap for at least 10-15 minutes and seek medical advice.

If you have got white spirit 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](http://www.nhs.uk/Conditions/Poisoning/Pages/Introduction.aspx)
