



# Tributyl phosphate

## General Information

### Key Points

- pale yellow odourless liquid
- the major uses of tributyl phosphate are as a flame retardant in aircraft hydraulics, as an extraction solvent and plasticizer
- released into the environment during its production and use
- the general population may be exposure to very low levels in food, drinking water and air
- breathing in vapours of tributyl phosphate may cause headache and irritation to the eyes, nose and throat
- eye or skin contact may cause irritation and pain

## Public Health Questions

### What is tributyl phosphate?

Tributyl phosphate is a colourless to pale yellow odourless liquid.

### What is tributyl phosphate used for?

The major uses of tributyl phosphate in industry are as a flame retardant component of aircraft hydraulic fluid, plasticiser in the manufacture of plastics, anti-foaming agent and as a solvent for substance extraction and purification.

### How does tributyl phosphate get into the environment?

Tributyl phosphate may enter the environment during its production and use.

### How might I be exposed to tributyl phosphate?

The general public may be exposed to very low levels of tributyl phosphate as a contaminant in air or water.

Exposure to tributyl phosphate is can occur in the workplace, where the chemical is stored, manufactured or used. Exposure is most likely to occur as a result of its use as an ingredient in aircraft hydraulic fluid. Safe levels are enforced to protect the health of workers; such levels are below those that are thought to cause harmful effects.

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

The presence of tributyl phosphate 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 tributyl phosphate by breathing or drinking it or by skin or eye 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.

Breathing in vapours of tributyl phosphate may cause headache and irritation to eyes, nose and throat. Contact with the skin or eyes may cause irritation and pain.

### Can tributyl phosphate cause cancer?

There is insufficient data available to assess whether tributyl phosphate causes cancer in humans.

## Does tributyl phosphate affect pregnancy or the unborn child?

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

## How might tributyl phosphate affect children?

Children exposed to tributyl phosphate are expected to show the same symptoms as adults.

## What should I do if I am exposed to tributyl phosphate?

It is very unlikely that the general population will be exposed to a level of tributyl phosphate high enough to cause adverse health effects. However, if you have any health concerns regarding exposure to tributyl phosphate seek guidance from your GP or contact NHS 111.

## Additional sources of information

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

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

This information contained in this document from the PHE Centre for Radiation, Chemical and Environmental Hazards is correct at the time of its publication.

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