



Isopropanol

General Information

Key Points

- also known as isopropyl alcohol and propan-2-ol
- highly flammable, colourless liquid with an odour that resembles alcohol
- may be released into the environment during its production and use; it is used in consumer products such as cosmetics and pharmaceuticals
- general population may be exposed to very small amounts of isopropanol due to its use in various consumer products
- inhalation may cause mild irritation of the eyes, nose and throat
- ingestion can cause a burning sensation of mouth and throat; stomach upset headache, dizziness, drowsiness, muscle weakness and rapid heart rate; in severe cases fitting, heart problems and coma can occur
- skin contact may cause a feeling of pins and needles and redness
- eye exposure may cause an immediate burning and stinging sensation and tearing

Public Health Questions

What is isopropanol?

Isopropanol is a highly flammable, colourless liquid with an odour that resembles alcohol. Other common names for isopropanol are isopropyl alcohol and propan-2-ol.

What is isopropanol used for?

Isopropanol is present in a variety of consumer products. Such products include window cleaners, disinfectants, hand sanitisers, rubbing alcohol, de-icers and anti-freeze products. It is also used in the production of cosmetics, pharmaceuticals and other industrial chemicals.

How does isopropanol get into the environment?

Isopropanol may be released into the environment during its production and use.

How might I be exposed to isopropanol?

The general population may be exposed to very small amounts of isopropanol due to its use in various consumer products. Low level exposure from the correct use of these products would be not expected to cause adverse health effects.

Exposure to isopropanol may also occur in an occupational setting. 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 isopropanol how might it affect my health?

The presence of isopropanol 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 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.

Inhalation of isopropanol vapours may cause mild irritation of the eye, nose and throat. Ingestion of isopropanol can cause a burning sensation in the mouth and throat, stomach upset, headache, dizziness, drowsiness, muscle weakness and rapid heart rate. In severe cases heart problems, fitting and coma can occur.

Skin contact can cause redness and a feeling of pins and needles. Prolonged skin contact can cause symptoms similar to those seen following ingestion. Eye contact may cause an immediate burning and stinging sensation and tearing.

Can isopropanol cause cancer?

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

Does isopropanol affect pregnancy or the unborn child?

There is no evidence to suggest that isopropanol, at concentrations that do not affect the mother, can affect the health of the unborn child.

How might isopropanol affect children?

Children exposed to isopropanol would be expected to display similar effects to those seen in adults. It is important to ensure that household products that contain isopropanol are stored in a safe container and are kept out of the reach of children.

What should I do if I am exposed to isopropanol?

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

Please see below for advice following accidental exposure to isopropanol.

You should remove yourself from the source of exposure.

If you have inhaled or ingested isopropanol seek medical advice.

If you have got isopropanol on your skin, remove soiled clothing (not over 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 isopropanol 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>

NHS Choices – How do I deal with minor burns? <http://www.nhs.uk/chq/Pages/1047.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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