



Methyl ethyl ketone

General information

Key Points

- Toxic by all routes of exposure
- Chemical classification: irritant
- Inhalation of high levels can cause irritation of the nose, throat and lungs and chest tightness.
- Ingestion causes inflammation of the mouth and stomach upset
- Skin contact may cause irritation, redness, drying and dermatitis
- Inhalation, ingestion or prolonged skin contact can also cause headache, dizziness, tiredness, slurred speech, low temperature, fitting and coma
- Eye contact can cause irritation and in severe cases permanent eye damage

Background

Methyl ethyl ketone is a colourless, volatile, highly flammable liquid with a fruity odour similar to acetone. Other common names are butanone and MEK.

Methyl ethyl ketone is produced naturally at low levels by some trees, bacteria and seaweeds. It is also a natural component of a wide range of foods.

Methyl ethyl ketone is produced industrially in large quantities and is mainly used as a solvent in protective coatings. It is also used for degreasing metals, in the manufacture of magnetic tapes, in the production of other industrial chemicals and as an extraction solvent in food processing. In addition to industrial uses, methyl ethyl ketone is also used in various household products, including paints, paint removers, varnishes and glues.

Methyl ethyl ketone may enter the environment during its production, transport and use. It may also be released from vehicle exhausts, natural sources and during the breakdown of other chemicals.



For the general population, exposure to methyl ethyl ketone can occur from cigarette smoking. People may also breathe in small amounts when using household products that contain methyl ethyl ketone.

Exposure to methyl ethyl ketone may also occur in the workplace although safe levels are enforced to protect the employees. Such levels are below those that are thought to cause harmful effects.



If exposed to methyl ethyl ketone, the potential adverse health effects that may occur depend on the way people are exposed and the amount to which they are exposed. Breathing in high levels of methyl ethyl ketone vapour can cause irritation of the nose, throat and lungs and chest tightness. Ingestion may cause inflammation of the mouth and stomach upsets. Skin contact with methyl ethyl ketone may cause irritation with redness, dryness and dermatitis and eye contact causes irritation. Prolonged contact may result in permanent damage to the eye.

Methyl ethyl ketone can also be absorbed into the body following inhalation, ingestion or prolonged skin exposure causing headache, dizziness, tiredness, slurred speech, low temperature, fitting and coma. Heart problems and high levels of blood sugar can also occur.

Exposure to methyl ethyl ketone, at levels that do not affect the mother, are unlikely to affect the health of the unborn child.

There are no data on whether methyl ethyl ketone causes cancer in humans.

Frequently Asked Questions

What is methyl ethyl ketone?

Methyl ethyl ketone is a colourless, volatile, highly flammable liquid with a fruity odour. It is used in industry as a solvent in protective coatings, in the production of other industrial chemicals and as an extraction solvent in food processing. It is also an ingredient of various household products including paints, varnishes and glues.

How does methyl ethyl ketone get into the environment?

Methyl ethyl ketone enters the environment during its production and use, from vehicle exhausts, from natural sources and during the breakdown of other chemicals.

How will I be exposed to methyl ethyl ketone?

The general public may be exposed to low levels of methyl ethyl ketone as a contaminant in air or by cigarette smoking. People may be exposed to small amounts of methyl ethyl ketone due to its use in household products such as paints and varnishes. Although methyl ethyl ketone is naturally present in various foods, levels are very low. Exposure may also occur in the workplace where it is produced or used.

If there is methyl ethyl ketone in the environment will I have any adverse health effects?

The presence of methyl ethyl ketone 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.

Inhalation of methyl ethyl ketone can cause nose, irritation of the throat and lungs and chest tightness. Ingestion may cause stomach upset and inflammation of the mouth. Skin contact causes irritation, redness, drying and dermatitis. More severe exposure to methyl ethyl ketone by inhalation, ingestion or skin contact may cause headache, dizziness, tiredness, slurred speech, low temperature, fitting and coma. Eye can cause irritation and in severe cases permanent damage to the eye.

Can methyl ethyl ketone cause cancer?

There are no data on whether methyl ethyl ketone causes cancer in humans.

Does methyl ethyl ketone affect children or damage the unborn child?

Exposure to methyl ethyl ketone at concentrations that do not affect the mother, are unlikely to affect the health of the unborn child. However, exposure to methyl ethyl ketone during pregnancy should be avoided because of its general toxic effects.

What should I do if I am exposed to methyl ethyl ketone?

METHYL ETHYL KETONE – GENERAL INFORMATION

If you have got methyl ethyl ketone 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 methyl ethyl ketone in your eyes remove contact lenses, wash the affected area with lukewarm water for at least 10 – 15 minutes and seek medical advice.

If you have inhaled or ingested methyl ethyl ketone seek medical advice.

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