


O₃

Ozone

CHEMICAL STRUCTURE:

DESCRIPTION:
Ozone is a pale blue gas made up of three oxygen atoms.

MAIN SOURCES:
Reactions of pollutants from industrial sources and NO₂ in sunlight



Ozone is:

- **A very pale blue, almost colourless gas.**
- **Made up of three oxygen atoms joined together.**
- **Has a distinct smell at high concentrations.**

Ozone is a very pale blue, almost colourless gas made up of three oxygen atoms joined together. It has a distinct smell at high concentrations.

Ozone is a naturally occurring gas in the upper layers of the atmosphere, between 10 and 30 miles above the earth's surface, which protects the earth from the sun's harmful ultraviolet rays. You'll probably have heard it referred to as the ozone layer.

However, at ground level, ozone is a harmful secondary air pollutant. Ozone is

created by chemical reactions between emissions from industrial facilities, vehicle exhausts and chemical solvents in sunlight. Nitrogen oxides (NO₂ and NO) and volatile organic compounds (VOCs) react in the presence of sunlight to produce ozone. Ozone and the primary pollutants that lead to its production can also be transported long distances e.g. from continental Europe.

In the UK, ozone is the most common cause of air quality problems in rural areas such as some parts of Kent. The

highest levels of ozone pollution occur in the summer on hot, sunny, windless days.

Ground level ozone is harmful to health, it can have a noticeable effect on health, triggering asthma, causing breathing problems, reducing lung function and potentially causing lung diseases. At sufficiently high concentrations, ozone is also harmful to plants and trees. Ozone can also corrode building materials, statues and monuments, and natural rock features in the landscape.