

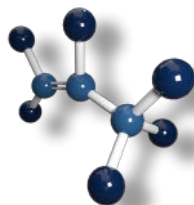
## Propene

**Formula:** C<sub>3</sub>H<sub>6</sub>

**CAS:** 115-07-1

**Source:** Manufacturing of resins, fibres, elastomers & Chemical

**Detection Method:** Tiger, Tiger<sup>LT</sup>, Cub, Falco, TVOC 2, GasClam 2 & GasCheck G



Propene, also known as propylene or methyl ethylene, is an unsaturated organic compound having the chemical formula C<sub>3</sub>H<sub>6</sub>. It has one double bond, and is the second simplest member of the alkene class of hydrocarbons. It is a colourless gas with a faint petroleum-like odour.

### C<sub>3</sub>H<sub>6</sub> - EXCESSIVE EXPOSURE MAY RESULT IN SEDATION AND AMNESIA

#### What Is Propene?

Is a colourless fuel gas with a naturally pungent smell. Although similar to propane, it has a double bond which gives it a combustion advantage i.e. it burns hotter. This fuel gas is extremely flammable and non-toxic. Propylene is obtained during the refining of gasoline. But it can also be produced by splitting, cracking and reforming hydrocarbon mixtures.

Propene is an attractive alternative to propane for heating and cutting due to its superior combustion performance. It is also widely used as a fuel gas for high-velocity oxygen fuel (HVOF) processes. In addition, the chemical and plastics industries rely on propene as a fuel gas.

Non-fuel applications include organic synthesis to produce materials such as acetone. Propene can be polymerised to form polypropylene plastic. It can also be employed as a refrigerant, or in calibration mixtures and as a chemical intermediate.

#### Propene In The Petrochemical Industry

Propene is one of the major building blocks of the petrochemical industry. Propene is typically obtained via two main routes: either as a co-product of the refinery catalytic cracking process used to make gasoline (resultant product known as refinery grade propylene) or as a co-product of the steam cracking process used to make ethylene (known as chemical grade propylene). There are also a number of technologies for making propylene directly from other feedstocks. The most common of these on-purpose process routes are propane dehydrogenation and metathesis.

#### Environmental Safety

Propene is a product of combustion from forest fires, cigarette smoke, and motor vehicle and aircraft exhaust. It is an impurity in some heating gases. Observed concentrations have been in the range of 0.1-4.8 parts per billion (ppb) in rural air, 4-10.5 ppb in urban air, and 7-260 ppb in industrial air samples.

Propene has low acute toxicity from inhalation. Inhalation of the gas can cause anesthetic effects and at very high concentrations, unconsciousness. However, the asphyxiation limit for humans is about 10 times higher (23%) than the lower flammability level.

#### Propene Detection Instruments



Fixed Instruments



Semi-Portable Instruments



Portable Instruments



Personal Instruments

