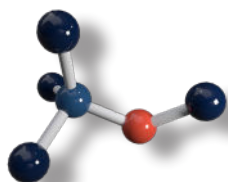


## Methyl mercaptan



**Formula:** CH<sub>4</sub>S

**CAS:** 74-93-1

**Source:** Coat tar, Petroleum, Jet fuels, Pesticides & Manufacturing plastics

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

At room temperature (above 43°F), methyl mercaptan is a colourless gas with an unpleasant odour described as rotten cabbage. It is slightly soluble in water. It is generally shipped as a liquefied compressed gas. When heated to decomposition, it emits toxic fumes, such as sulfur dioxide, and flammable vapours. Methyl mercaptan should be stored in cool, well ventilated places. The main toxic effect of exposure to methyl mercaptan is irritation of the respiratory airway, skin, and eyes.

### CH<sub>4</sub>S - LIQUID METHYL MERCAPTAN OR THE GAS MAY CAUSE FROSTBITE INJURY

#### Methyl Mercaptan

Methyl mercaptan, or methanethiol, is a colourless, flammable gas with a distinct odour that smells like rotten eggs or cabbage. It is found in coal tar and petroleum distillates and as an emission from paper and pulp mills. Methyl mercaptan occurs naturally in some foods (e.g., onions, radishes, asparagus, some nuts and cheese). It is naturally formed by microflora metabolism of proteins in marine environments and in human and animal gastrointestinal tracts. You might also recognize methyl mercaptan as part of the “boggy” smell that naturally occurs from decaying matter in marshes.

While methyl mercaptan is strongly odorous, the low levels present in foods, human breath, sea air, and bogs are not considered safety risks. Most humans can detect methyl mercaptan odour at concentrations 500 times lower than the accepted safe exposure limit.

#### Why We Use Methyl Mercaptan

Methyl mercaptan is mainly used to produce methionine, which is used as a dietary supplement for poultry and animal feed. Methyl mercaptan also is used in industrial applications as an intermediate in the production of pesticides, fungicides, plastics and animal feed additives. As an industrial intermediate, the chemical is reacted into something else or fully consumed to make the product.

Contrary to many reports, methyl mercaptan is not used as an odorant in natural gas, propane, or other gaseous fuels. The “mercaptan” odorants used to give the distinctive odour to these fuels are other mercaptan and sulfide chemistries.

#### Inhalation Of Methyl Mercaptan

Inhalation is the major route of exposure to methyl mercaptan. An odour threshold of 0.002 ppm has been reported for methyl mercaptan, but olfactory fatigue may occur and thus, it may not provide adequate warning of hazardous concentrations. Vapours of liquefied methyl mercaptan gas are heavier than air and spread along the ground. Exposure in poorly ventilated, enclosed, or low-lying areas can result in asphyxiation.

#### Methyl mercaptan Detection Instruments



Fixed Instruments



Semi-Portable Instruments



Portable Instruments



Personal Instruments

