Understanding Gases

Ethylene

C_2H_4

Ethylene is a hydrocarbon gas produced from natural gas, coal gas, and crude oil.

It is used in the creation and manufacture of a plethora of materials and substances, including fabricated plastics, antifreeze, fibres, ethylene oxide, polyethylene for plastics, alcohol, and other organics.

It is used widely within the chemical industry and throughout the world, whilst being recognised as a building block for a range of other common chemical compounds.

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As well as causing harm to human health, the flammability and reactivity of ethylene can lead to damage to the environment.

What are the dangers of Ethylene?

Ethylene is harmful in high concentrations to human health. As with all refrigerant gases, if inhaled it can damage the respiratory system, as well as cause frostbite when coming into contact with skin. Other symptoms of ethylene exposure include headaches, dizziness, fatigue, light-headedness, and confusion.

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How do you detect Ethylene?

Although often noticeable from its sweet, musky smell, detection from smell alone is not a failsafe approach when it comes to ensuring human and environmental health and safety. The implementation of a reliable gas detection system is required to safeguard the individuals and the environments which could be affected by the presence of ethylene.

Measuring ethylene levels across a variety of applications can be achieved using an ethylene gas detector. Common detector types include catalytic, infrared or electrochemical detection, however MPS detection can now be added to that list of detection techniques.

What should you do if you are exposed?

If exposed to ethylene, quick action will reduce the impact. In the case of exposure to the eyes for a gas other than at room temperature, they should be immediately flushed with water. When ethylene comes into contact with the skin at anything other than room temperature gas, clothing should be removed and washed immediately.

Breathing assistance may be required for those who have inhaled ethylene at temperatures other than room temperature. The need for breathing support will depend on the temperature and amount ingested.

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