# Gas Factsheet

# Sulfur hexafluoride

Formula: SF<sub>6</sub> CAS: 2551-62-4 Industries: Switchgears, Electrical Sector Detection Method: SF6 AreaCheck, SF6 Leakmate, SF6 LeakCheck Detectors & GasCheck G

Sulphur hexafluoride  $(SF_6)$  is an inorganic, colourless, odourless, non-flammable, heavy gas that has been widely regarded as an excellent electrical insulator. However, although  $SF_6$  is inert during normal use, highly toxic by products are produced that pose a serious health threat to the workers who come into contact with them when electrical discharges occur through everyday usage within  $SF_6$  filled equipment.

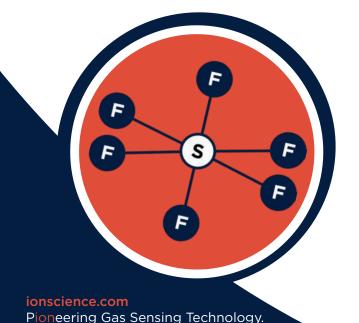
## SF<sub>6</sub> - THE MOST POTENT GREENHOUSE GAS IN EXISTENCE!

#### **Health Hazards**

Sulfur hexafluoride displaces oxygen and thus carries the risk of asphyxia if too much is inhaled and, being colourless and odourless, detection is impossible with human senses. Being denser than air, if a substantial quantity of gas is released it settles in low-lying areas and if the area is entered presents dangers for workers.

#### Exposure

Under normal circumstances, it might be considered rare to be exposed to  $SF_6$  without enough oxygen dilution; but for utility employees, this type of exposure is well within the normal course of duties when working on  $SF_6$ filled switchgear in enclosed spaces. Indeed, if a substantial quantity of  $SF_6$  gas leaks in an enclosed area, it can pose real danger of asphyxiation to personnel.



#### A Potent Greenhouse Gas

SF<sub>6</sub> was identified by the Intergovernmental Panel on Climate Change (IPCC) the most potent greenhouse gas that it has evaluated which contributes to climate change. Once SF6 accumulates in the atmosphere there is no natural way of disposing it.

### **Electrical Industries Benefits**

 $SF_6$  is widely used by the electricity industry throughout the world in medium and high voltage switchgear and circuit breakers, because it is extremely effective as an electrical insulator and for quenching electric arcs. Some of the advantages of  $SF_6$  over compressed air or oil makes it a much more reliable source.

### Sulfur hexafluoride Detection Instruments







Fixed Instruments

Semi-Portable Instruments

Portable Instruments

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