

MSA Chemgard® Monitor

for Monitoring of SF₆ in Electrical Substations



Application

Sulfur hexafluoride (SF₆) is used in electrical substations as an insulator gas for high voltage breakers and ancillary equipment. Because of its excellent physical properties and unparalleled dielectric capabilities, it is used worldwide in the electric utility industry. This inert, non-toxic gas has excellent cooling, insulating, and arc-quenching capabilities in potentially high temperature applications such as electrical breakers.

Unfortunately, the Global Warming Potential (GWP) of SF₆ is 23,900 times the effect of an equal mass of carbon dioxide and has a 3,200-year atmospheric lifetime. These properties make SF₆ a significant environmental hazard if not properly monitored. Many electrical utility companies are upgrading their systems to provide SF₆ monitoring capabilities.

Solution

The Chemgard Photoacoustic Infrared Monitor provides economical, reliable detection of sulfur hexafluoride. A 0-1% by volume sulfur hexafluoride Chemgard Monitor provides low ppm detection of SF₆ releases and alarm indication when the concentration exceeds the threshold limit value.

0-1% Chemgard Monitor units, as well as ranges of 0-100 ppm and 0-1,000 ppm, have been successfully applied to SF₆ detection in electron microscope facilities (SF₆ is used as an insulator gas for high voltages required to produce strong magnetic fields in microscopes, as well as in facilities using SF₆ as an etching compound).

Sulfur Hexafluoride

Formula	TLV	Chemgard Monitor Minimum Detection Limit
SF ₆	1,000 ppm	0.05 ppm

Note: This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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