

MSA Gas Detection System Chemgard® Monitor with Stainless Steel Flow System for Phosgene Detection



Phosgene

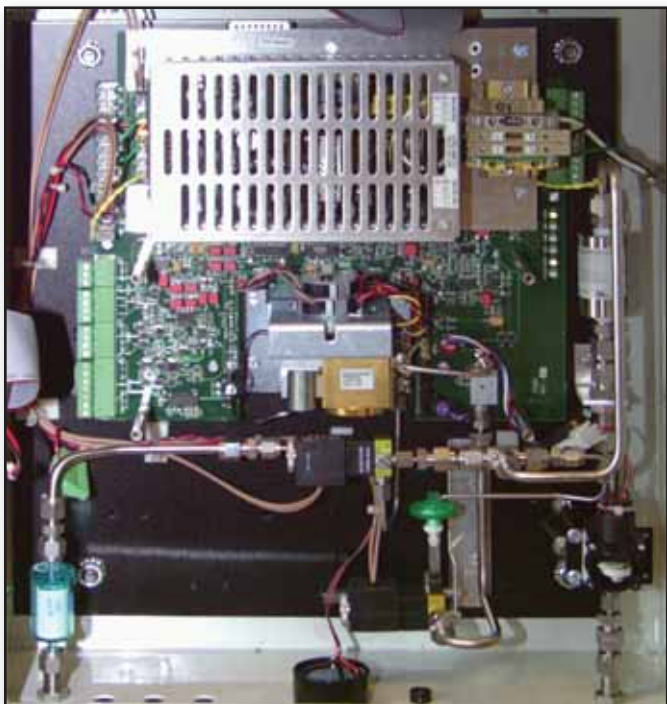
Phosgene (COCl_2), also known as carbonyl chloride, is a commonly used industrial compound. Phosgene primarily serves as an intermediate reactant in the process of synthesizing organic compounds. Processes include the manufacturing of pharmaceuticals, isocyanates (plastics and adhesion production), coal tar, polyurethanes (foam production), resins, polymers, pesticides and dyes. Its most notorious use was as a chemical warfare agent in World War I. Phosgene is a colorless, highly toxic chemically reactive gas. Exposure to it can potentially cause death through severe lung injury (pulmonary oedema).

Application

During production, phosgene monitoring is needed to determine process efficiency and detect upset conditions. Additional phosgene detection is required in containment areas and ductwork to monitor for potential system leaks. These applications do not require detection down to the TLV for phosgene (0.1 ppm) since there is no direct worker exposure in these areas.

Previously, other process-type monitors (infrared, chromatographic) have been used in this application. The photoacoustic infrared (PIR) detection technology used in the Chemgard Monitoring System offers more cost-effective monitoring with less maintenance requirements. The Chemgard Monitor is a simple, fast, reliable alternative for these process and area monitoring applications.

The Chemgard system's internal flow scheme is outfitted with stainless steel tubing and fittings for better chemical resistance and to make the unit more rugged for process applications. In the flow scheme, a stainless steel switch is included to indicate flow loss. The stainless steel flow design is a new custom option that can be extended to any available application to handle process applications or applications where material compatibility is a concern. (See data sheet # A-07-0001 for a list of compounds.) With this phosgene application, the standard Chemgard pump is used to pull in sample from a remote location while flow and pressure are regulated externally. Alternatively, depending upon application requirements, the internal pump can be removed and the flow and pressure regulated completely in the process manifold.



Interior - Chemgard Monitor with stainless steel flow system for phosgene detection

Specifications

Flow Requirements:	0.75 – 1.5 LPM
Pressure Requirements:	50 in. of water $\pm$ 5 in.
Operating Temperature Range:	0-50 °C, 32-122 °F
Power Supply:	120 VAC $\pm$ 10% at 0.56 Amps or 240 VAC $\pm$ 10% at 0.3 Amps
Alarm Relays:	3 relays at 8 Amps resistive
Enclosures:	<i>NEMA 4:</i> 18"H x 16"W x 7"D; 40 lbs. <i>19" Rack Mount:</i> 7"H x 17-5/8"W x 15-1/4"D; 19 lbs. <i>Explosion Proof (XP):</i> 19-1/8"H x 19-1/8"W x 9-1/2"D; 100 lbs.

Product Description

- Chemgard Monitor with stainless steel flow scheme
- Monitoring range of 0-100 ppm or 0-10 ppm phosgene and a detection limit of 0.5 ppm.

For more information on the standard Chemgard Gas Monitor, see data sheet #07-2033.

Note: This is a representative description of this product and its possible applications. Contact MSA Custom Products at customproducts@MSAnet.com for information on customizing this unit to fit a specific need.

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.



ID 07-2069-MC / March 2011
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