



MSA Gas Detection System

[for Monitoring Toluene in Adhesive Tape Production]

Application

In the manufacturing of adhesive tape, a sticky glue must be applied to one side of a polymer film or a woven film in the case of duct tape. This glue is dissolved in a hydrocarbon carrier that allows the glue to be transported. Toluene is sometimes used as the carrier for the glue.

After the glue is deposited on one side of the film, the film is heated up in an oven. As the toluene/glue mixture on the film is heated, the toluene is driven off as a vapor. The toluene is not allowed to be vented and it is recovered and reused. It is recovered via a carbon bed scrubber system.

This custom Chemgard® Gas Monitoring System and its accompanying flow panel detects when toluene is breaking through the carbon bed scrubber indicating that the scrubber is no longer able to absorb the toluene. The relays within the Chemgard System signal the process controller to redirect the process stream to another scrubber and to apply steam to cleanse this particular scrubber.

The previous equipment used for this application was a flame ionization unit (FID). Drawbacks to this system, which were overcome by using the Chemgard System, included: lack of blowback to the sample system, which caused the FID flame to be extinguished when water was pumped into the unit; expensive hydrogen and air cylinders needed to support the flame inside of the analyzer; and the use of a flame within the instrument, which is located in a potentially explosive classified area.

Product Description

The Chemgard Gas Monitor uses highly reliable, cost-effective photoacoustic infrared gas detection to provide precise, low-cost, high-performance monitoring of a wide variety of gases. The Chemgard Monitor is extremely stable and highly selective to the gas of interest, and can operate for months with virtually no zero drift.

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



Specifications

Operating Temperature Range:	0-50° C, 32-122° F
Power:	120 VAC ± 10% at 0.56 Amps, or 240 VAC; ±10% at 0.3 Amps
Alarm Relays:	3 relays @ 8 Amps resistive
Enclosures:	NEMA 4: 18"H x 16"W x 7"D, 40 lbs. 19" Rack Mount: 7"H x 17-5/8"W x 15-1/4"D, 19 lbs. Explosion-proof (XP): 19-1/8"H x 19-1/8"W x 9-1/2"D, 100 lbs.

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

Note: This Data Sheet contains only a general description of the product shown. While uses and performance capabilities are described, under no circumstances should the product be used except by qualified, trained personnel, and not until the instructions, labels or other literature accompanying the product have been carefully read and understood and the precautions therein set forth followed. Only they contain the complete and detailed information concerning this product.

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