Honeywell

Midas® SENSOR CARTRIDGE SPECIFICATIONS

Tetra-Ethyl-Ortho-Silicate (TEOS)
MIDAS-S-TEO, MIDAS-E-TEO

Gas Measured	Tetra-Ethyl-Ortho-Silicate (TEOS)
Cartridge Part Number	MIDAS-S-TEO 1 year standard warranty MIDAS-E-TEO 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range (ppm)	TEOS 0 – 40ppm
Minimum Alarm 1 Set Point	5.00ppm
Repeatability	< ± 2% of measured value
Linearity	< ± 10% of measured value
Response Time $t_{62.5}$	< 25 seconds
Sensor Cartridge Life Expectancy	≥ 24 months under typical application conditions
Operating Temperature **Effect of Temperature Zero** Sensitivity	0ºC to +40ºC (32ºF to 104ºF) < ± 0.06ppm / ºC (0ºC to 20ºC) < ± 0.15ppm / ºC (20ºC to 40ºC) < ± 1.8% of measured value / ºC
Operating Humidity (continuous) **Effect of Humidity** Zero Sensitivity	15 – 90% rH No effect < ± 1% of measured value / % rH
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift Zero Sensitivity	 < ± 2ppm / year < ± 5% of measured value / year
Calibration Gas	Ethylene Oxide (ETO)
Challenge Gas (Bump Test)	Ethylene Oxide (ETO)
Warm Up Time	< 10 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on ideal test environment; observed performance may vary based on the actual monitoring system and the sampling conditions employed

Other Detectable Gases

The following additional gases can be detected with this sensor cartridge. Sensor performance and characteristics will be representative of the data as tabulated above. Consult the Technical Manual to set up the Midas® transmitter with the designated identification code for each of the following gas types.

Detectable Gas	Chemical Formula	Measuring Range
Cyclopentyl Methyl Ether	$C_6H_{12}O$	0 – 40 ppm

Cross Sensitivities

Each Midas® sensor is potentially cross sensitive to other gases and this may cause a gas reading when exposed to other gases than those originally designated. The table below presents typical readings that will be observed when a new sensor cartridge is exposed to the cross sensitive gas (or a mixture of gases containing the cross sensitive species).

Gas / Vapor	Chemical Formula	Concentration Applied (ppm)	Reading (ppm TEOS)
Carbon Monoxide	CO	10	4
Ethanol	C_2H_5OH	10	7.3
Ethylene Oxide	C_2H_4O	10	9.1
Iso Propanol	C_3H_7OH	10	3.3
Methyl Ethyl Ketone	C_4H_8O	10	1
Toluene	C_7H_8	10	2

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