

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
Lower Detectable Limit (LDL)	3.60ppm
Repeatability	< ± 2% of measured value
Linearity	< ± 10% of measured value
Response Time $t_{92.5}$	< 25 seconds
Sensor Cartridge Life Expectancy	≥ 24 months under typical application conditions
Operating Temperature	0°C to +40°C (32°F to 104°F)
Effect of Temperature Zero	< ± 0.06ppm / °C (0°C to 20°C) < ± 0.15ppm / °C (20°C to 40°C)
Sensitivity	< ± 1.8% of measured value / °C
Operating Humidity (continuous)	15 – 90% rH
Effect of Humidity	
Zero	No effect
Sensitivity	< ± 1% of measured value / % rH
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< ± 2ppm / year
Sensitivity	< ± 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

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 ₂ H ₅ OH	10	7.3
Ethylene Oxide	C ₂ H ₄ O	10	9.1
Iso Propanol	C ₃ H ₇ OH	10	3.3
Methyl Ethyl Ketone	C ₄ H ₈ O	10	1
Toluene	C ₇ H ₈	10	2

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