

## Midas<sup>®</sup> SENSOR CARTRIDGE SPECIFICATIONS

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



Gas Measured	Tetra-Ethyl-Ortho-Silicate (TEOS)
<b>Cartridge Part Number</b>	MIDAS-S-TEO 1 year standard warranty MIDAS-E-TEO 2 year extended warranty
<b>Sensor Technology</b>	3 electrode electrochemical cell
<b>Measuring Range (ppm)</b>	TEOS 0 – 40ppm
<b>Minimum Alarm 1 Set Point</b>	5.00ppm
<b>Repeatability</b>	< ± 2% of measured value
<b>Linearity</b>	< ± 10% of measured value
<b>Response Time <sub>t62.5</sub></b>	< 25 seconds
<b>Sensor Cartridge Life Expectancy</b>	≥ 24 months under typical application conditions
<b>Operating Temperature</b>	0°C to +40°C (32°F to 104°F)
<b>Effect of Temperature Zero</b>	< ± 0.06ppm / °C (0°C to 20°C) < ± 0.15ppm / °C (20°C to 40°C)
Sensitivity	< ± 1.8% of measured value / °C
<b>Operating Humidity (continuous)</b>	15 – 90% rH
<b>Effect of Humidity</b>	
Zero	No effect
Sensitivity	< ± 1% of measured value / % rH
<b>Operating Pressure</b>	90 – 110kPa
<b>Effect of Position</b>	No effect in typical application
<b>Long Term Drift</b>	
Zero	< ± 2ppm / year
Sensitivity	< ± 5% of measured value / year
<b>Calibration Gas</b>	Ethylene Oxide (ETO)
<b>Challenge Gas (Bump Test)</b>	Ethylene Oxide (ETO)
<b>Warm Up Time</b>	< 10 minutes
<b>Storage Temperature</b>	+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<sup>®</sup> 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)
<b>Carbon Monoxide</b>	CO	10	4
<b>Ethanol</b>	C <sub>2</sub> H <sub>5</sub> OH	10	7.3
<b>Ethylene Oxide</b>	C <sub>2</sub> H <sub>4</sub> O	10	9.1
<b>Iso Propanol</b>	C <sub>3</sub> H <sub>7</sub> OH	10	3.3
<b>Methyl Ethyl Ketone</b>	C <sub>4</sub> H <sub>8</sub> O	10	1
<b>Toluene</b>	C <sub>7</sub> H <sub>8</sub>	10	2

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