

Midas[®] SENSOR CARTRIDGE SPECIFICATIONS

Ammonia (NH₃) MIDAS-S-NH3, MIDAS-E-NH3



Gas Measured	Ammonia (NH ₃)
Cartridge Part Number	MIDAS-S-NH3 1 year standard warranty MIDAS-E-NH3 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range (ppm)	NH ₃ 0 – 100ppm
Minimum Alarm 1 Set Point	12.5ppm
Repeatability	< ± 5% of measured value
Linearity	< ± 2% of measured value
Response Time t_{92.5}	< 10 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	< ± 0.1ppm / °C
Zero	< ± 1% of measured value / °C (0°C to 25°C)
Sensitivity	< ± 0.2% of measured value / °C (25°C to 40°C)
Operating Humidity (continuous)	15 – 90% rH
Effect of Humidity	
Zero	TBA
Sensitivity	TBA
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	TBA
Sensitivity	< ± 3% of measured value / 6 months
Calibration Gas	Ammonia (NH ₃)
Challenge Gas (Bump Test)	Ammonia (NH ₃)
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.

Note: Extended exposure to background concentrations of ammonia may shorten life time of sensor.

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 NH ₃)
Arsine	AsH ₃	0.2	0.07
Carbon Dioxide	CO ₂	5000	0
Carbon Monoxide	CO	100	0
Chlorine	Cl ₂	1	0
Ethanol	C ₂ H ₅ OH	1000	0
Hydrogen	H ₂	10000	0
Hydrogen Chloride	HCl	10	-4
Hydrogen Sulphide	H ₂ S	20	2
Iso Propanol	C ₃ H ₇ OH	1000	0
Methanol	CH ₃ OH	1000	0
Nitrogen Dioxide	NO ₂	10	-0.5
Phosphine	PH ₃	300	0
Sulphur Dioxide	SO ₂	20	-40

Interference differs from cartridge to cartridge and over cell life. It is not recommended to calibrate with cross sensitivity factors. The target gas should be used for calibration.