

Phosgene Sensor

Sensoric COCl₂ 3E 1

Product Data Sheet

Sensoric COCl₂ 3E 1

FEATURES

Amperometric 3 electrode sensor cell
Fixed organic electrolyte
High reliability

TYPICAL APPLICATIONS

Ambient monitoring of TLV levels
Chemical Industry, Homeland Security

PART NUMBER INFORMATION

SENSORIC CLASSIC	1731-031-11069
CTL 4 series adaptation	1731-031-14049
CTL 7 series adaptation	1731-031-17079

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.

Product Data Sheet

Sensoric COCl₂ 3E 1

TECHNICAL SPECIFICATIONS

Measuring Range	0–1 ppm
Sensitivity Range	650 nA/ppm ± 150 nA/ppm
Zero Current at 20 °C	< ± 10 nA
Resolution at 20 °C	< 0.02 ppm
Bias Potential	0 mV
Linearity	< 10% full scale
Response Time at 20 °C	
t ₅₀	< 60 s calculated from 2 min. exposure time at 40% r.H.
t ₉₀	< 120 s calculated from 2 min. exposure time at 40% r.H.
Long Term Sensitivity Drift	< 5% per 6 months
Operation Conditions	
Temperature Range	-20 °C to +40 °C
Humidity Range	15–90% r.H., non-condensing
Effect of Humidity	no effect
Sensor Life Expectancy	> 12 months
Warranty	7 months

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.

Sensoric COCI2 3E 1

OUTPUT & ZERO READING vs. TEMPERATURE:

Due to the nature of the gas the temperature dependence of the sensor as a function of the environmental temperature conditions is strongly related to the experimental conditions.

SensoriC is currently revising this set of data.

Based on the current experience with this sensor and comparable electrochemical systems the temperature dependence

- a) on the zero reading is < 0.02 ppm*
- b) on the sensitivity is < 20% of the sensitivity at 20 °C*

within the specified temperature range.

Please contact our Technical Marketing Department (sales_europe@citytech.com) for further details.

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.

Product Data Sheet

Sensoric COCl₂ 3E 1

CROSS SENSITIVITIES AT 20 °C

Gas	Concentration	Reading [ppm]
Ammonia	100 ppm	0
Arsine	0.2 ppm	0.18
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	0
Chlorine	1 ppm	0.4
Chlorine Dioxide	1 ppm	-3
Hydrogen Chloride	10 ppm	25
Hydrogen Sulfide	20 ppm	yes; n/d (after filter break through)
Isopropanol	1100 ppm	0
Methane	1 %	0
Nitrogen Dioxide	10 ppm	-1
Ozone	0.25 ppm	-0.03

Notes:

1. Interference factors may differ from sensor to sensor and with life time. It is not advisable to calibrate with interference gases.
2. This table does not claim to be complete. The sensor might also be sensitive to other gases.

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.



Safety Note

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

Attention

Use of the Sensoric range sensors requires complete understanding of the instructions. Before using Sensoric range sensors please carefully read 'Application Notes' which can be found at www.citytech.com under the heading 'Support' -> 'Application Notes' -> 'Sensoric'

Product Safety Data Sheets (PSDS) can be obtained at www.citytech.com under the heading 'Support' -> 'Product Safety Datasheets'

For further assistance on sensor selection and use, please contact a member of the Technical Sales team.

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.