



PRODUCT SAFETY DATASHEET

EC4 Series Electrochemical Toxic Gas Sensors

• Overview

- Summary

• Inherent hazards

- Hazards that are present as a result of the composition and construction of the product.

• Operational hazards

- Hazards that are only present when the product is in operation.

• Decommissioning

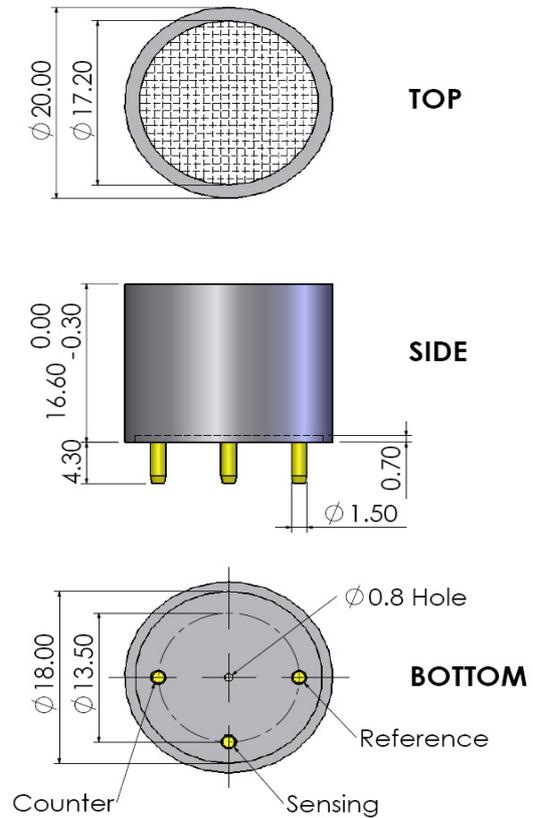
- Particular hazards that may be present during decommissioning of the product.

• Disposal

- Guidance for the safe disposal of product at end of life including environmental considerations.

• Material data

- A breakdown of the material content of all product types covered by this Product Safety Data Sheet.



All dimensions in mm.
All tolerances ± 0.15 mm unless otherwise stated.

Overview

These sensors require the presence of an acid electrolyte for their operation. This acid is tightly contained within an absorption media within the overall plastic body. In normal operation the chances of exposure to the acids are very small.

Inherent Hazards

These sensors contain a small quantity (~0.5 ml) of either 5M Sulfuric Acid or 5.7M Ortho-phosphoric Acid (SO_2 and PH_3 sensors). Both of these acids are corrosive. In normal operation there is a minimal risk of these liquids escaping from the sensor body.

The sensors also contain a very small amount of a metallic powder or carbon. These compounds are catalysts and if removed from the sensor body, and dried out, could promote oxidation and ignition of flammable/oxidisable species. In addition the dry powder could cause irritation to eyes and respiratory system.

These sensors contain small pins. Care needs to be taken to prevent puncture injuries.

If leakage of the contents is observed, gloves and eye protection should be worn to limit the chances of exposure before attempting any clean up procedures. Any spilt liquid and the sensor body can be washed with copious amounts of water.



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Operational Hazards

Applying an excessive voltage to the sensor could cause excessive internal heating increasing the chances of leakage from the sensor caused by rupture of the internal seals.

Decommissioning

There are no particular hazards associated with decommissioning of this product.

Disposal

Sensors must not be disposed of by burning or crushing. Sensors must be disposed of according to local regulations.



This Product is compliant with the RoHS directive, 2002/95/EC

Material Data

The following table of material data provides information to assist disposal in accordance with environmental regulations.

Sensor Type	Mass (g)	Approximate composition %						
		5 M (38%) Sulfuric Acid / Water CAS 7664-93-9	5.7 M Ortho-Phosphoric Acid / Water CAS 7664-38-2	Brass	ABS	Catalyst Platinum Black, Ruthenium black, Gold Powder, Silver Powder, Graphite (See Note 1)	PTFE	Glass Fibre
EC4 Series Electrochemical sensor (excluding SO ₂ and PH ₃)	~5.6	~15%	0	~5%	~60%	<5%	<5%	<10%
EC4 Series Electrochemical sensor (SO ₂ and PH ₃ ONLY)	~5.6	0	~15%	~5%	~60%	<5%	<5%	<10%

Note 1: The catalyst contained in the sensor may be made up of one or several of these elements.

In the event of encountering difficulties in disposing of these products, contact SGX Sensortech (IS) Ltd for advice.