



Safety Data Sheet Oxygen Electrochemical Sensors

Version 6

Issued 21 August 2015

Section 1: Identification

Electrochemical sensors for:	OXYGEN		
Alphasense Product Codes	O2-A1	O2-A2	O2-A3
	O2-C2	O2-C3	
	O2-G1	O2-G2	

Product Use: Sensing component for gas detection devices

Supplier Name: ALPHASENSE Ltd
Address: Sensor Technology House
300 Avenue West
Skyline120, Great Notley
Essex. CM77 7AA. UK

Telephone Number: +44 (0) 1376 556700
Fax Number: +44 (0) 1376 335899
Email: sensors@alphasense.com

Section 2: Hazard(s) Identification

These sensors are not considered a chemical hazard in normal use and are defined as an article under the OSHA Hazard Communication Standard.

Section 3: Composition / Information On Ingredients

Alphasense electrochemical sensors are sealed units containing small quantities of:

Lead (Pb) 10-16g
Potassium acetate (KC₂H₃O₂) electrolyte
Graphite (C)
Lead Oxide (PbO)
Antimony (Sb)
Platinum (Pt)
Acrylonitrile butadiene styrene ABS (outer casing)
Polytetrafluoroethylene (PTFE)
Cellulose
Cured epoxy resin glue

Section 4: First-Aid Measures

First Aid measures in the event of exposure to electrolyte leakage:

Rinse immediately in copious amounts of water and seek medical advice if contact with the eyes or mouth has been made.

Section 5: Fire-Fighting Measures

Suitable Extinguisher Media	Use extinguisher measures that are appropriate to local circumstances, sensor does not present additional risk
Hazardous Combustion products	Thermal decomposition may liberate oxides of carbon and other toxic gases or vapours
Advice for fire fighters	Wear self contained breathing apparatus (SCBA) and appropriate protective clothing

Section 6: Accidental Release Measures

Exposure to the sensor electrolyte (Irritant) is the only component that may potentially prove hazardous to health. Exposure can occur as a result of misuse, incorrect operation, manufacturing error or physical damage. If the sensor is suspected of leaking handle using disposable gloves, nitrile or latex and dispose of following section 13. Small leaks of electrolyte can be mopped up using any suitable absorbent wipe or material.

Section 7: Handling and Storage

Alphasense electrochemical sensors should only be used in the designated manner. Sensors must not be used if damaged and must not be dismantled

Environmental Conditions: Sensors must not be exposed to temperatures, humidities and pressures outside the ranges quoted in the individual sensor datasheets.

Storage Conditions: Sensors must be stored in airtight containers between 0 and 20°C.

Shelf-life Maximum of 6 months

Section 8: Exposure Control / Personal Protection

Personal precautions in normal use: No eye or skin protection required.

Section 9: Physical and Chemical Properties

Alphasense electrochemical sensors are sealed solid units containing small quantities of materials listed in section 3.

Section 10: Stability and Reactivity

Stability: Stable under recommended storage conditions.

Section 11: Toxicological Information

Alphasense electrochemical sensors are sealed units containing small quantities of
Lead (Pb)
Lead Oxide (PbO)
Antimony (Sb)

Deliberate disassembly can lead to exposure to these materials

Section 12: Ecological Information

At the end of the product's life Alphasense sensors must be disposed of in an environmentally safe manner, in compliance with relevant local waste disposal and environmental legislation. In standard use the sensor poses no risk to the environment.

Section 13: Disposal Considerations



Do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions.

Oxygen sensors contain lead and should not be disposed of in normal trade waste.

Sensors must not be burned because of the potential risk of evolution of toxic fumes.

Section 14: Transport Information

There are no general requirements for special labelling or packaging, although you are advised to check for specific local regulations.

The following regulations apply to Alphasense electrochemical sensors:

UN2800 (Batteries Wet Non-Spillable), Dangerous Goods Regulation Section 4.5

Section 15: Regulatory Information

Oxygen sensors are exempt from the provisions of The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2008, as amended, ("the RoHS Regulations") in the UK and the European Parliament and Council Directive on the Restrictions of the use of certain Hazardous Substances in electrical and electronic equipment ("the RoHS Directive"), as amended

Section 16: Other Information

Preparation Date :	07/09/2011	
Revision Date	20/08/2015	
Revision Summary	07/09/2012	Reformatted to 16 Section format
	08/05/2012	Minor amendments
	21/08/2015	Reformatted and updated to SDS format

Disclaimer: The information provided in this SDS is correct to the best of our knowledge, belief and information at the date of its publication. The information given is designed only as a guide to the safe handling, use, processing, storage, transportation disposal and release and is not to be considered a warranty or product specification. The information relates only to the products listed in Section 1.

End of SDS



Safety Data Sheet Toxic Electrochemical Sensors

Version 7

Issued 17 July 2017

Section 1: Identification

Electrochemical sensors for:

AMMONIA (NH ₃)	HYDROGEN CYANIDE (HCN)
CHLORINE (Cl ₂)	HYDROGEN SULFIDE (H ₂ S)
CARBON MONOXIDE (CO)	NITRIC OXIDE (NO)
ETHYLENE OXIDE (EtO)	NITROGEN DIOXIDE (NO ₂)
HYDROGEN (H ₂)	OZONE (O ₃)
HYDROGEN CHLORIDE (HCl)	PHOSPHINE (PH ₃)
OXYGEN - LEAD FREE (O ₂)	SULFUR DIOXIDE (SO ₂)

Alphasense	CL2-A1	CO-D4	H2S-AE	NO-B4	SO2-AE
Product Codes	CL2-B1	COH-A2	H2S-AH	NO-D4	SO2-AF
	CL2-D4	CO2-D1	H2S-A4	NO2-A1	SO2-A4
	CO-AE	D2	H2S-B1	NO2-AE	SO2-BF
	CO-AF	ETO-A1	H2S-BE	NO2-A42F	SO2-B4
	CO-AX	ETO-B1	H2S-BH	NO2-B1	SO2-D4
	CO-A4	H2-AF	H2S-B4	NO2-B42F	SOH-A2
	CO-BF	H2-BF	H2S-D4	NO2-D4	LFO2-A4
	CO-BX	HCL-A1	NH3-B1	OX-A421	
	CO-B4	HCN-A1	NO-A1	OX-B421	
	CO-CE	HCN-B1	NO-AE	PH3-A1	
	CO-CF	HCN-D4	NO-A4	PH3-B1	
	CO-CX	H2S-A1	NO-B1	PH3-BE	

Product Use: Sensing component for gas detection devices

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Essex. CM77 7AA. UK

Telephone Number: +44 (0) 1376 556700
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Section 2: Hazard Identification

These sensors are not considered a chemical hazard in normal use and are defined as an article under the OSHA Hazard Communication Standard.

Section 3: Composition / Information On Ingredients

Alphasense toxic electrochemical sensors are sealed units containing small quantities of:

Sulphuric acid (H₂SO₄) {CAS-No. 7664-93-9} or propylene carbonate

Platinum (Pt) or other noble metals or other non-toxic catalysts

Polycarbonate or Noryl™ – sensor housing

Polytetrafluoroethylene (PTFE)

Glass fibre

Potassium permanganate (KMnO₄)

Manganese dioxide (MnO₂)

Silver Sulphate (Ag₂SO₄)

Carbon

Section 4: First-Aid Measures

First Aid measures in the event of electrolyte leakage:

Rinse immediately in copious amounts of water and seek medical advice if contact with the eyes or mouth has been made.

Section 5: Fire-Fighting Measures

Suitable Extinguisher Media

Use extinguisher measures that are appropriate to local circumstances, sensor does not present additional risk

Hazardous Combustion products

Thermal decomposition may liberate oxides of carbon and other toxic gases or vapours

Advice for fire fighters

Wear self contained breathing apparatus (SCBA) and appropriate protective clothing

Section 6: Accidental Release Measures

Exposure to the sensor electrolyte (acid) is the only component that may potentially prove hazardous to health. Exposure can occur as a result of misuse, incorrect operation, manufacturing error or physical damage. If the sensor is suspected of leaking handle using disposable gloves, nitrile or latex and dispose following section 13. Small leaks of electrolyte can be mopped up using any suitable absorbent wipe or material.

Section 7: Handling and Storage

Alphasense electrochemical sensors should only be used in the designated manner. Sensors must not be used if damaged and must not be dismantled

Environmental Conditions:

Sensors must not be exposed to temperatures, humidities and pressures outside the ranges quoted in the individual sensor datasheets.

Storage Conditions:

Sensors must be stored in airtight containers between 0 and 20°C.

Shelf-life

Maximum of 6 months

Section 8: Exposure Control / Personal Protection

Personal precautions in normal use:

No eye or skin protection required.

Section 9: Physical and Chemical Properties

Alphasense electrochemical sensors are sealed solid units containing small quantities of materials listed in section 3.

Section 10: Stability and Reactivity

Stability: Stable under recommended storage conditions.

Section 11: Toxicological Information

Alphasense electrochemical sensors are sealed units containing small quantities of the materials listed in section 3. Deliberate disassembly can lead to exposure to these materials

Section 12: Ecological Information

At the end of the products life Alphasense sensors must be disposed of in an environmentally safe manner, in compliance with relevant local waste disposal and environmental legislation.

Section 13: Disposal Considerations



Do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions.

Sensors must not be burned because of the potential risk of evolution of toxic fumes.

If in doubt, contact Alphasense and we will advise on methods of disposal or, if within the UK, arrange for disposal.

Section 14: Transport Information

There are no general requirements for special labelling or packaging, although you are advised to check for specific local regulations.

Section 15: Regulatory Information

The following regulations apply to Alphasense electrochemical sensors:

UN2800 (Batteries Wet Non-Spillable), Dangerous Goods Regulation Section 4.5

Section 16: Other Information

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	14/11/2013	New products added
	21/08/2015	Reformatted and updated to SDS format and new products added

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