

Section 1 Identification

Product Name: Percent Oxygen Sensor – OKS Series & Private Label Derivations
 Standard: 29 CFR 1910.1200 Revised 08/01/2024
 Manufacturer: Southland Sensing Ltd.
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Product Use: Percent Oxygen Sensor

Section 2 Hazard(s) Identification**Note:**

Oxygen sensors contain a basic electrolyte solution sealed inside of a plastic housing. In normal operating conditions the basic electrolyte solution does not present a health hazard. In case of a sensor leak please observe the following information:

Basic Electrolyte (Potassium Hydroxide / KOH) Solution:

Corrosive to Metals: Category 1
 Acute Toxicity: Category 4 (Oral)
 Skin Corrosion: Category 1A
 Serious Eye Damage: Category 1
 Acute Aquatic Toxicity: Category 3

Lead (Pb):

Acute Toxicity: Category 4 (inhalation)
 Acute Toxicity: Category 4 (Oral)
 Carcinogenicity: Category 2
 Reproductive/Developmental: Category 2
 Target Organ Toxicity: Category 2
 Acute Aquatic Toxicity: Category 1
 Chronic Aquatic Toxicity: Category 1

GHS Label: Basic Electrolyte (Potassium Hydroxide / KOH) Solution:**Symbols:*****Hazard Statements:***

- Danger.
- May be corrosive to metals.
- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- Harmful to aquatic life.

Precautionary Statements:

- Wash skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release into the environment.
- Wear protection (gloves/clothing/eye wear/face wear).
- If SWALLOWED: Call a poison control center or physician if you feel unwell.
- If SWALLOWED: Rinse mouth, Do NOT induce vomiting.
- If touches SKIN: Remove / Take off contaminating clothes. Rinse skin with water / and or shower.
- If INHALED: Move victim to fresh air, allow for comfortable for breathing.
- If in EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to accomplish. Continue rinsing and immediately call a POISON CONTROL CENTER for physician.
- Wash contaminated clothing before reuse.
- Absorb spillage to prevent material damage.
- Dispose of contents / container to an approved waste disposal area.

Section 2 Hazard(s) Identification

GHS Label: Lead (Pb):

Symbols:



Hazard Statements:

- Warning!
- Harmful if swallowed.
- Suspected of Causing Cancer.
- Suspected of damaging fertility or the unborn child.
- May cause damage to organs through prolonged or repeated exposure.
- Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

- If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult physician immediately.
- In case of skin contact, wash off with soap and water.
- In case of eye contact, flush eyes with water.
- If swallowed, rinse mouth out with water.

Section 3 Composition/Information on Ingredients

Material:	CAS Number:	Quantity:	SHA PEL:	ACGIH
Lead (Pb)	7439-92-1	4 - 26 gms	0.05 mg/m ³	0.15mg/m ³
Potassium Hydroxide (KOH)	1310-58-3	1 - 12 ml	2 mg/m ³	2 mg/m ³

Section 4 First-Aid Measures

Note: Oxygen sensors contain a basic electrolyte solution sealed inside of a plastic housing. In normal operating conditions the basic electrolyte solution does not present a health hazard. In case of a sensor leak please observe the following information:

General Advice: Consult a physician with this safety data sheet. Move out of the dangerous area.

If Inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Promptly consult a physician.

In Case of Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and water. Promptly consult a physician.

In Case of Eye Contact: Rinse thoroughly with water for at least 15 - 20 minutes and consult a physician. Continue to rinse eyes during transport to hospital.

If Swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water and consult a physician.

Special Note: The most important and known symptoms and effects are described in the labelling section. See section 2 of the Safety Data Sheet.

Section 5 Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Lead oxides.

Advice for Firefighters: Wear self-contained breathing apparatus for fire fighting if necessary.

Additional Advice: Potential to give off hydrogen by reaction with metals.

Section 6 Accidental Release Measures

Note: Oxygen sensors contain a basic electrolyte solution sealed inside of a plastic housing. In normal operating conditions the basic electrolyte solution does not present a health hazard. In case of a sensor leak please observe the following information:

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Contain spillage. Neutralize spill with soda ash or lime. Carefully place material into clean dry container and cover. Flush spill area with water. Avoid creating dust.

Section 7 Handling and Storage

Precautions for safe handling:

- Avoid Rough Handling.
- Avoid Exposing Sensor(s) to Rapid Changes in Pressure.
- Avoid Puncturing or Damaging Sensor Membrane(s).
- In Case of Sensor Leakage, See Section 6.

Conditions for safe storage, including and incompatibilities: Store sensors in a cool, dry and well ventilated place.

Section 8 Exposure Controls/Personal Protection

Control Parameters:

Component	CAS #	Value	Control Parameter	Basis
Potassium Hydroxide (KOH)	1310-58-3	C	2 mg/m ³	USA, ACGIH Threshold Limit Values (TLV)
	Remarks:	Eye, Skin & Upper Respiratory Tract Irritation.		
		See 1910.1025		
		C	2 mg/m ³	USA, OSHA - Table Z-1 Limits for Air Contaminants - 1910.100
		C	2 mg/m ³	USA, NIOSH Recommended Exposure Limits.

Components with workplace control parameters:

Component	CAS #	Value	Control Parameter	Basis
	Remarks:	See 1910.1025		
Lead (Pb)	7349-92-1	WTA	0.05 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Confirmed Animal Carcinogen with Unknown Relevance to Humans.		
		WTA	0.05 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System Impairment Hematologic Effects Peripheral Nervous System Impairment Substance for which there is a Biological Exposure Index Confirmed Animal Carcinogen with Unknown Relevance to Humans.		

Biological Occupational Exposure Limits:

Component	CAS #	Parameters	Value	Biological Specimen	Basis
Lead (Pb)	7349-92-1	Lead (Pb)	0.3ug/mL	In Blood	ACGIH - Biological Exposure Indices (BEI)
		Remarks:	Not Critical		

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the shift.

Personal Protective Equipment:

- **Eye/Face Protection:** Safety glasses with side-shields or goggles conforming to the appropriate government standards such as ANSI (US) or EN 166 (EU).
- **Skin Protection:** Handle with Nitrile or Latex gloves. Gloves must be inspected prior to use. Use proper glove removal technique (Without touching gloves outer surface with skin). Dispose of contaminated gloves after use in accordance with local laws and good laboratory practices. Wash and dry hands.
- **Respiratory and Body Protection:** Wear respiratory protection and full protective clothing tested and approved under appropriate government standards such as ANSI (US) or CEN (EU).
- **Control of Environmental Exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided.

Section 9	Physical and Chemical Properties
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Information on Basic Physical and Chemical Properties of Electrolyte Solution:

a) Appearance	Form: Liquid Color: Clear / Translucent
b) Odor	None
d) pH	> 13
g) Flash Point	> 100°C
n) Water Solubility	100% (water based solution)

Note: remaining parameters No Data Available.

Section 10 Stability and Reactivity**Note:**

The percent oxygen sensors contain a basic solution also referred to as "electrolyte solution" which is encapsulated in a plastic sensor body. Under normal operating conditions the electrolyte solution is never exposed. In case of a leak, please observe the following information:

- Chemical Stability: Stable under recommended storage and usage conditions. Heat of solution is high, addition of water to leaked electrolyte solution may cause heating.
- Conditions to Avoid: Heat, Flame and Sparks.
- Incompatible Materials: Strong acids, Nitro compounds, organic materials, magnesium, copper, metals, light metals, contact with aluminium, tin and zinc can cause hydrogen gas.

Section 11 Toxicology Information**Information on Toxicology effects (Potassium Hydroxide KOH Solution) & Lead:**

- Toxicity to Animals: Acute Oral Toxicity (LD50): 333 mg/kg (Rat).
- Mutagenicity: Lead tested as a mutagen in the Ames Test.
- Serious Eye Damage / Eye Irritation: OECD Test Guideline 405.

Section 12 Ecological Information

Ecotoxicity: The LC50 of lead for the daphnia magna is 3.6 mg/l, and 5.1 mg/l for the daphnia pulex.

Environmental Fate: Lead is bioaccumulative in most aquatic life and mammals. It is highly mobile as dust or fumes (+30 mesh is the smallest particle size found inside the oxygen sensor), yet forms complexes with organic material which limits its mobility.

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

Section 13 Disposal Considerations

Waste must be disposed of in accordance with Federal, State, and Local environmental controls and regulations. If discarded in its purchased form, the product is hazardous by its characteristics of toxicity and corrosivity under RCRA.

- EPA Waste Number: D008, D002
- DOT Information: Corrosive liquid, basic, inorganic, n.o.s. (Potassium Hydroxide & Lead), 8, UN3266, II.

Follow all Federal, State, and Local Regulations.

Section 14 **Transport Information****DOT:** Regulated, meets criteria for small quantity exceptions of 49 CFR 173.4**IATA:** Regulated, meets criteria for IATA dangerous goods in excepted quantities, sec: 2.7.**Section 15** **Regulatory Information****U.S. Federal Regulations:**

1. OSHA Hazardous by definition of Haz Com Std. 29 CFR 1910.1200
2. SARA TITLE III Sec. 302 (40 CFR Part 365): Not Applicable as to chemical name, CAS#, %, TPQ lbs., RQ
Sec. 311 & 312: YES as to Acute and Chronic Health Hazard;
NO as to Fire and Sudden Release of Pressure Hazard, Reactive.
Sec. 313 (40 CFR Part 372): This product contains the following toxic chemicals subject to the reporting requirements of Section 313, of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical Name	CAS #	Lead Content
Lead (Pb)	7439-92-1	5 - 30 gms

3. TSCA (Toxic Substances Control Act): Components of this product are listed on the TSCA Inventory.

4. CERCLA Section 102(A) (40 CFR Part 302) - Hazardous Substances and Reportable Quantities:

Chemical Name	CAS #	BO
Lead (Pb)	7439-92-1	10 lbs
Potassium Hydroxide (Solid)	1310-58-3	1,000 lbs

5. State Regulations
California Proposition 65: WARNING: This product contains lead, a chemical known to the state of California to cause cancer, birth defects or other reproduction harm.
Massachusetts: Potassium Hydroxide is a listed chemical.
Pennsylvania: Potassium Hydroxide is a listed chemical.

International Regulations:

Canada: Canadian Environmental Protection Act (CEPA) Potassium Hydroxide, Liquid, is on the Domestic Substances List (DSL) and is acceptable for use under the provisions of CEPA.

WHMIS:	Chemical Name	Class
	Potassium Hydroxide	D-2A: Material causing other very toxic effects. E: Corrosive liquid
	Lead	D-2A: Material causing other very toxic effects.

European Union: Potassium Hydroxide (liquid) R35 - Causes severe burns
R42 - May cause sensitization by inhalation
R36/37/38 - Irritating to eyes, respiratory system and skin.

Section 16 **Other Information**

All chemicals may pose unknown hazardous and should be used with caution. While the information contained in this Safety Data Sheet is believed to be correct and is offered for your information, consideration and investigation, Southland Sensing Ltd. assumes no responsibility for the completeness or accuracy of the information contained herein.