

## MATERIAL SAFETY DATA SHEET

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MSDS #2030

Oxygen Sealed Sensor,  
Ventrex

Revised: 2/2007

### PART 1, MATERIAL IDENTIFICATION

**Material Name:** Sealed electrochemical oxygen sensor

**Chemical Name & Synonyms:** None

**Chemical Family:** Alkaline solution electrolyte, noble metal electrode and plastic housing

**Formula:** KOH, Pb, ABS & PTFE

### PART II, Ingredients & Hazards

%

TLV

Potassium Hydroxide Solution Electrolyte  
Lead Electrode  
(Electrode may also contain platinum, carbon, gold or silver)  
ABS & PTFE housing

< 30

2 mg/M3 Ceiling (Dust)  
0.05 mg/M3

(2006 TLV Book)

### PART III, Physical Data

**Boiling Point, 1 Atm, °F (°C):** N/A

**Specific Gravity:** >1 (H<sub>2</sub>O = 1)

**Vapor Pressure, mm Hg:** N/A

**Evaporation Rate:** N/A

**Solubility in Water:** Potassium hydroxide is soluble

**Appearance & Odor:** The electrolyte is a clear alkaline liquid with little detectible odor.

### PART IV, Fire & Explosion Data

Flash Point & Method

Auto Ignition Temp. °C

Flammability Limits

Lower

Upper

unknown

unknown

None

None

None

#### Extinguishing Media:

Suitable for surrounding fire.

#### Special Firefighting Procedures:

Use SCBA's when fighting fires encompassing chemicals.

#### Unusual Fire & Explosion Hazards:

Fires encompassing ABS plastics may emit hydrogen cyanide.

**PART V, Health Hazard Information****Applicable TLV's:**

Lead and lead compounds have a TLV of 0.05 mg/M3 (2006 TLV Book). The OSHA PEL for lead compounds is 50 micrograms/M3 (0.05 mg/M3). Potassium hydroxide has a TLV ceiling of 2 mg/M3 (2006 TLV Book). The OSHA PEL for potassium hydroxide is also 2 mg/M3 ceiling.

**Effects of Overexposure:****(Assuming direct contact with the electrolyte)**

Inhalation: Not expected unless heated to high temperatures. Mist or vapor inhalation would be irritating to nose, throat and upper respiratory tract.

Ingestion: May cause irritation to the mouth, throat and stomach.

Skin or Eyes: The electrolyte contacted directly could cause redness, pain, blurred vision and eye burns.

Other: Lead ingestion may cause harm to unborn children or cause impaired fertility. Lead ingestion can cause brain damage and damage to blood-forming, nervous, urinary and reproductive systems. Symptoms of over-exposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint soreness, tremors, dizziness and abdominal pain.

**Emergency & First Aid Procedure:**

Eyes: Flush with copious amounts of water for 15 minutes including under eyelids. Obtain medical advice.

Skin: Flush affected area with water for at least 15 minutes. Remove contaminated clothing. Obtain medical attention if irritation persists.

Ingestion: Dilute with milk or water. Do not induce vomiting for electrolyte ingestion. Do induce vomiting for lead ingestion. Get medical attention.

Inhalation: Remove to fresh air. Get medical attention.

**PART VI, Reactivity Information****Stability:**

The sensor electrolyte is a stable mixture with a useful shelf and service life of one year or more. Hazardous polymerization is not known to occur.

**Conditions to Avoid:**

Store away from oxidizers and acids. Keep away from sources of heat, spark or flame. Store in a cool dark place.

**Hazardous Decomposition Products:**

None known.

**PART VII, Spill, Leak & Disposal Procedures****Spills Procedure:**

Spills are not anticipated with sealed sensors. Leakage may be cleaned up with a paper towel.

**Disposal Procedure:**

The sensor contains lead and must be disposed by licensed disposal firm. Follow federal, state and local regulations for disposing of small scale chemicals.

**PART VIII, Special Protection Information****Protective Equipment:**

Use safety glasses when handling sensors. Leaking sensors should be handled with chemical resistant gloves.

**PART IX, Special Precautions & Comments****Handling & Storage:**

Store in a cool, dry place away from sources of light, heat and spark. Store away from oxidizers and acids. Store away from organic solvent vapors, which can cause physical damage to the body of the sensor.

**Other Precautions:**

Wash hands after handling sensors especially before eating, drinking and applying cosmetics or contact lenses.

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