

**SECTION I - PRODUCT IDENTIFICATION**

**Manufacturer's Name:** Maxtec, Inc.

**Address** 6526 South Cottonwood Street, Salt Lake City, Utah 84107

**Telephone** (801) 266-5300 (800)748-5355

**Date Prepared** October 29, 1996

**Date Revised** April 12, 2001

**Trade Name** Maxtec Oxygen Sensors (all classes except MAX-250 series, MAX-2, MAX-8, MAX-25 and MAX-50)

**Description** Base solution encapsulated in plastic housing

**SECTION II - HAZARDOUS INGREDIENTS OF SOLUTION**

**Lead (Pb)** CAS # 7439-92-1  
Quantity 3 - 20 gms  
OSHA/PEL 0.05 mg/m3  
ACGIH/TLV 0.15 mg/m3

NOTE: TLV and PEL are for lead, inorganic dusts and fumes, as Pb  
Lead has been reported as causing cancer in laboratory animals, exercise due care

**Potassium Hydroxide** CAS # 1310-58-3  
Quantity 1 - 5 mls  
OSHA/PEL 0.05 none  
ACGIH/TLV 2 mg/m3

NOTE: TLV and PEL are for solution 15% (KOH)

**SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS**

**Lead (Pb)**  
Boiling Point 1744  
Vapor Pressure N/A  
Melting Point (C) 328  
Solubility in Water Insoluble  
Specific Gravity 11.34  
Density N/A  
Evaporation Rate N/A  
Odor Solid, Silver Gray, Odorless

**Potassium Hydroxide**  
Boiling Point 1320  
Vapor Pressure N/A  
Melting Point (C) 360  
Solubility in Water Complete  
Specific Gravity 2.04  
Density N/A  
Evaporation Rate N/A  
Odor White or slightly yellow, no odor

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

Flash Point	N/A
Flammable Limits	N/A
LEL	N/A
UEL	N/A
Extinguishing Media	Use extinguishing media appropriate to surrounding fire conditions. No specific agents recommended.
Special Fire Fighting Equip.	Wear NIOSH/OSHA approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**SECTION V - REACTIVITY DATA OF SOLUTION**

Stability	Stable
Incompatibilities	Aluminum, organic materials, acid chlorides, acid anhydrides, magnesium, copper. Avoid contact with acids and hydrogen peroxide > 52%
Hazardous Decomposition of By-products	Toxic fumes
Hazardous Polymerization	Will not occur

**SECTION VI - HEALTH HAZARD DATA OF SOLUTION**

Routes of Entry	Inhalation: Highly unlikely
	Ingestion: May be fatal if swallowed
Skin	The electrolyte (potassium hydroxide) is corrosive; skin contact may cause irritation or chemical burns.
Eyes	The electrolyte (potassium hydroxide) is corrosive; eye contact may cause irritation or severe chemical burns.
Acute Effects	The electrolyte is harmful if swallowed, inhaled or absorbed through the skin. It is extremely destructive to tissue of the mucous membrane, stomach, mouth, upper respiratory tract, eyes and skin.

**Chronic Effects**

Prolonged exposure with the electrolyte has a destructive effect on tissue.

Chronic exposure to lead may cause disease of the blood and blood forming organs, kidneys and liver, damage to the reproductive systems and decrease in fertility in men and women, and damage to the fetus of a pregnant woman. Chronic exposure from the lead contained in this product is extremely unlikely.

**Signs and Symptoms of**

Contact of electrolyte with the skin or eyes will cause a burning sensation and /or feel soapy or slippery to touch. Other symptoms of exposure to lead include loss of sleep, loss of appetite, metallic taste and fatigue.

**Carcinogenicity**

Lead is classified by the LARC as a class 2B carcinogen (possibly carcinogenic to humans)

**OSHA**

Where airborne lead exposures exceed the OSHA action level, refer to OSHA Lead Standard 1910.1025.

**NTP**

N/A

**Medical Conditions Generally Aggravated by Exposure**

Lead exposure may aggravate disease of the blood and blood forming organs, hypertension, kidneys, nervous and possibly reproductive systems. Those with preexisting skin disorders or eye problems may be more susceptible to the effects of the electrolyte.

**Emergency First Aid Procedures**

In case of contact with the skin or eyes, immediately flush with plenty of water for at least 15 minutes and remove all contaminated clothing. Get medical attention immediately.  
If ingested, give large amounts of water and DO NOT INDUCE VOMITING. Obtain medical attention immediately.  
If inhaled, remove to fresh air and obtain medical attention immediately.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

NOTE: The oxygen sensors are sealed, and under normal circumstances, the contents of the sensors do not present a health hazard. The following information is given as a guide in the event that a cell leaks.

**Protective measures  
during cell replacement**

Before removing the sensor cell from the container, check for sensor cell leakage. If the sensor cell leaks, do not remove from container. If there is liquid around the cell while in the instrument, wear eye and hand protection.

**Cleanup Procedures**

Wipe down the area several times with a wet paper towel. Use a fresh towel each time. Contaminated paper towels are considered hazardous waste.

**SECTION VIII - CONTROL MEASURES****Eye Protection**

Chemical splash goggles

**Hand Protection**

Rubber gloves

**Other Protective Clothing**

Apron, face shield

**Ventilation**

N/A

NOTE: Handling sensors with exposed electrolyte

**SECTION IX - DISPOSAL**

Both lead and potassium hydroxide are considered hazards and are regulated under TSCA AND SARA Title III.

**EPA Waste Number**

D008

**California waste Number**

181

**DOT Information**

RQ Hazardous Waste Solid N.O.S. (Lead), 9, UN3077  
PG III  
Follow all Federal, State and Local regulations.

**SECTION X - REFERENCES**

Material Safety Data Sheets from J. T. Baker Chemical, Permagine Industries Inc., Royal Society of Chemistry

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