Section 1 - Chemical Product and Company Identification

GHS Product Indentifier
B225

Product Name
Zobell's Solution

Manufacturer Name
Sensorex Corporation

Recommended Use/ Restrictions on Use
Use as solution electrochemical ORP standard. Not for household use.

Address (Number, Street, City, State and Zip Code)
11751 Markon Drive

Garden Grove, CA. 92841 USA

Emergency Telephone Number (24 hr) (800) 222-1222
American Association of Poison Control Centers

Telephone Number for Information
714-895-4344

Section 2 - Hazards Identification

GHS Classification: Acute aquatic toxicity (Category 3), H402. Chronic aquatic toxicity (Category 3), H412

Hazard Statements:

H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P273 - Avoid release to the environment.
P501 - Dispose of contents/container to an approved waste disposal plant.

Other hazards not classified or covered by GHS: Contact with acids liberates very toxic gas.

Section 3 - Composition/Ingredient information

Chemical Identity	CAS Registry #	EC#	Percent Weight (%)
Potassium Chloride	7447-40-7	231-211-8	0.9
Potassium Ferrocyanide Trihydrate	14459-95-1	237-722-2	0.2
Potassium Ferricyanide	13746-66-2	237-323-3	0.1
Deionized Water	7732-18-5	231-791-2	Balance

Section 4 - First Aid Measures

Description of Necessary First Aid Measures:

General: Consult a physician. Present this safety data sheet to the doctor in attendance. Move out of dangerous area.
IF INHALED: Move person into fresh air. If not breathing, perform rescue breathing and contact emergency medical personel. If breathing is difficult, give oxygen.
SKIN CONTACT: Wash affected area with soap and water.
INGESTION: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
EYE CONTACT: Irrigate immediately with large quantity of water for at least 15 minutes. Consult a physician.

Most important symptoms/effects, acute and delayed:

INHALATION: No data available.
SKIN CONTACT: No data available.
EYE CONTACT: No data available.
INGESTION: No data available.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

No data available

Section 5 - Fire-fighting Measures

Suitable extinguishing media:

SUITABLE: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
UNSUITABLE: No unsuitable extinguishing media known.

Specific hazards arising from the chemical (combustion products):

N/A. Not flammable

Special protective actions for fire-fighters:

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

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency responders:

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Refer to Section 8 for Personal Protective Equipment.

Environmental precautions:

Do not let product enter drains.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal.

Section 7 - Handling and Storage

Precautions for safe handling:
Do not ingest. Do not get in eyes, skin or on clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibles:
Keep in tightly closed container. Store in a cool, dry, well-ventilated area.

INCOMPATIBLE MATERIALS: Ammonia, chromium trioxide + heat, cupric nitrate + heat, sodium nitrite + heat, acid and acid fumes, metal chlorates, perchlorates, nitrates or nitrites may cause violent explosions. May liberate toxic cyanide fumes when mixed with strong acids. Bromine trifluoride, potassium permanganate and sulfuric acid.

Section 8 - Exposure Controls/Personal Protection

Control parameters:
Occupational exposure limits:
Potassium ferricyanide (CAS 13746-66-2).

ACGIH TLV	C: 5.0 mg/m^3	Upper respiratory tract irritation/Headache/Nausea/Thyroid effects/Danger of cutaneous absorption varies.
	TWA: 1.0 mg/m^3	Upper respiratory tract irritation/Skin irritation varies
NIOSH REL	C: 4.70 ppm 5.0mg/m^3	
10 minute ceiling value	TWA: 1.0 mg/m^3	

Appropriate Engineering Controls:

Facilities storing or utilizing this product should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep any airborne concentrations low.

Individual protection measures, personal protective equipment:

RESPIRATORY PROTECTION: Use respirator.

SKIN PROTECTION: Wear appropriate protective gloves and clothes to prevent skin exposure.

EYE PROTECTION: Recommended. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 European Standard EN166.

Section 9 - Physical and Chemical Properties

APPEARANCE: Bright yellow liquid
ODOR: None
ODOR THRESHOLD: N/A
FLASH POINT: N/A
VAPOR PRESSURE: No data available
RELATIVE DENSITY: 1
pH: Approximately 7
BOILING POINT (°C): Approximately 100
MELTING POINT (°C): Approximately 0
FLAMMABILITY: N/A
VAPOR DENSITY: No data available
SOLUBILITY IN WATER: Infinite
PARTITION COEFFICIENT (n-octonol/water): No data available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available
EVAPORATION RATE compared with (n-butyl acetate = 1): 0.36 (water)
VISCOSITY: No data available
AUTO-IGNITION TEMPERATURE: N/A
DECOMPOSITION TEMPERATURE: No data available

Section 10 - Stability and Reactivity

REACTIVITY:
Stable under normal conditions of use and storage.

CONDITIONS TO AVOID:
Temperatures above 60 °C, direct sunlight and contact with sources of heat. Contact with acids liberates very toxic gas.

CHEMICAL STABILITY:
Stable under normal conditions of use and storage.

POSSIBILITY OF HAZARDOUS REACTIONS:
Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS: Ammonia, chromium trioxide + heat, cupric nitrate + heat, sodium nitrite + heat, acid and acid fumes, metal chlorates, perchlorates, nitrates or nitrites may cause violent explosions. May liberate toxic cyanide fumes when mixed with strong acids. Bromine trifluoride, potassium permanganate and sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS:
No data available.

Section 11 - Toxicological Information

Acute toxicity: LD50 oral - mouse 2970 mg/kg (Potassium ferricyanide)
LD50 oral - rat 3613 mg/kg (Potassium ferrocyanide trihydrate)
Skin corrosion/irritation: Not classified.
Serious eye damage/irritation: Not classified.
Respiratory or skin sensitization: Not classified.
Germ cell mutagenicity: Not classified.
Carcinogenicity: Not classified.
Reproductive toxicity: Not classified
STOT Single exposure: Not classified.
STOT Repeated exposure: Not classified.
Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics:
INHALATION: No data available.
SKIN CONTACT: No data available.
EYE CONTACT: No data available.
INGESTION: No data available.
AFTER ABSORPTION OF LARGE QUANTITIES: No data available.
AFTER REPEATED EXPOSURE: No data available.
Delayed and immediate effects also chronic from short and long term exposure:
The substance is toxic to blood, lungs, mucous membranes.

Numerical measure of toxicity:
TOXICITY DATA United States:
LD50 oral - mouse 2970 mg/kg (Potassium ferricyanide)
LD50 oral - rat 3613 mg/kg (Potassium ferrocyanide trihydrate)
LD50 oral - rat 2600 mg/kg (Potassium chloride)

Section 12 - Ecological Information

ECOTOXICITY:
Potassium chloride
Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - 880 mg/L - 96 hr
Mortality NOEC - *Pimephales promelas* (fathead minnow) - 500 mg/L - 7 d
Mortality LOEC - *Pimephales promelas* (fathead minnow) - 1000 mg/L - 7 d
Toxicity to daphnia and other aquatic invertebrates EC50 - *Daphnia magna* (water flea) - >440 mg/L - 2 d (OECD Test guideline 202)

Potassium ferricyanide
Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 869 mg/L - 96 hr
Toxicity to daphnia and other aquatic invertebrates EC50 - *Daphnia magna* (water flea) - 549 mg/L - 48 hr

Potassium ferrocyanide trihydrate
Toxicity to daphnia and other aquatic invertebrates EC50 - *Daphnia magna* (water flea) - 32 mg/L - 48 hr

PERSISTANCE AND DEGRADABILITY: No data available

BIOACCUMULATIVE POTENTIAL: No data available

MOBILITY IN SOIL: No data available

OTHER ADVERSE EFFCTS: No data available

Section 13 - Disposal Considerations

Material does not have an EPA waste number and is not listed as waste. Always contact a permitted waste disposal professional to assure compliance with federal, state and local regulations.

Section 14 - Transportation Information

UN NUMBER: Not dangerous goods under transport regulations
UN PROPER SHIPPING NAME: N/A
TRANSPORT HAZARD CLASS(ES): Class 9: Miscellaneous hazardous material
PACKING GROUP: III
ENVIRONMENTAL HAZARD: Marine pollutant (potassium ferricyanide)

Section 15 - Regulatory Information - (NOT ALL INCLUSIVE)

UNITED STATES

OSHA STATUS: The items listed on this SDS do not contain any hazardous material or the potentially hazardous material is present in such low concentration that the items do not present any immediate threat to health or safety. These items do not meet the OSHA Hazard Communication Standard (29CFR 1910.1200) definition of hazardous material.

TSCA Status: All components of this solution are listed on the TSCA Inventory, or are mixtures (hydrates) of items listed on the TSCA Inventory.

CERCLA Reportable Quantity:		None.
SARA Title III:	Section 302 Extremely Hazardous Substances:	No
	Section 311/312 Hazardous Categories:	No
	Section 313 Toxic Chemicals:	No
RCRA Status:		No
California Proposition 65:		Not listed

Section 16 - Other Information

Date of preparation: April, 2015
This Safety Data Sheet replaces MSDS Zoebell, REV A.

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Sensorex Corporation assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.

Full text of Hazard Statements referred to in Section 2:
H 402 Acute aquatic toxicity (Category 3).
H 412 Chronic aquatic toxicity (Category 3). Harmful to aquatic life with long lasting effects.