

# B125 ORP Calibration Kit

## Product Instructions

### Introduction

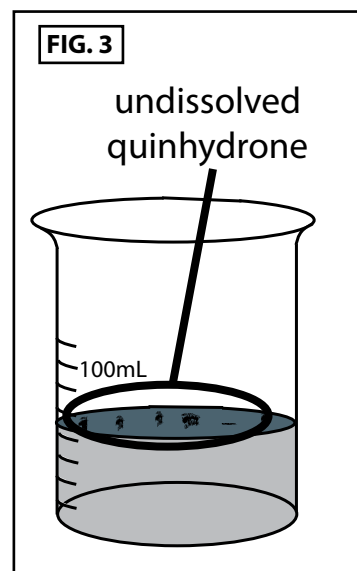
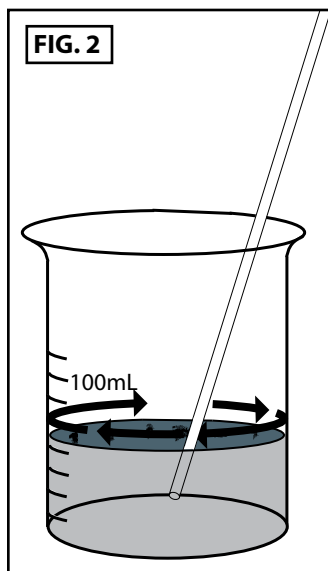
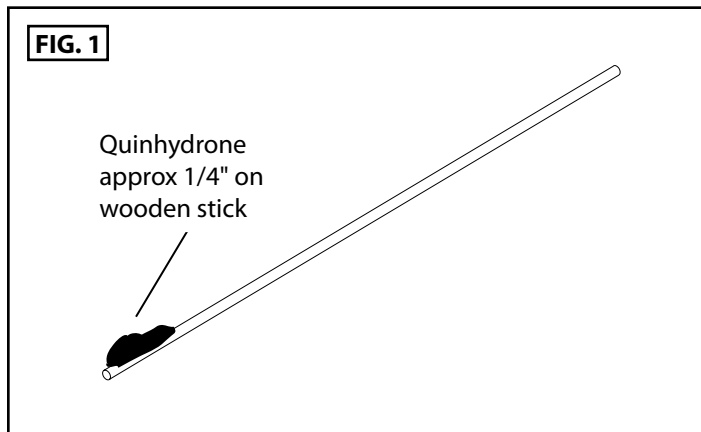
The performance of an ORP electrode can be determined by use of the ORP Calibration Kit and the procedures given below. The Calibration Kit can be used for about 30 two-point calibrations.

### Items Included

Item	Quantity
pH 4.01 buffer	1 pint
pH 7.00 buffer	1 pint
quinhydrone powder	20 grams
plastic beakers (150mL)	3 each
wooder applicator sticks	approx 50

### Preparation

- Fill a beaker with de-ionized or distilled water to use for rinsing the electrode.
- Fill a second beaker to the 1/2 oz mark with pH 7 buffer.
  - To this buffer add the amount of quinhydrone that stays on about 1/4 inch (6 mm) of the wood applicator (see sketch).
  - Use the wood applicator to stir the quinhydrone into the buffer.
  - A small amount of quinhydrone **MUST** remain undissolved; if all the quinhydrone dissolves add a small amount and stir. Repeat as necessary until a small amount of quinhydrone remains un-dissolved.
- Fill a third beaker to the 1/2 oz mark with pH 4 buffer.
  - To this buffer add the amount of quinhydrone that stays on about 1/4 inch (6 mm) of the wood applicator (SEE FIG 1).
  - Use the wood applicator to stir the quinhydrone into the buffer (SEE FIG 2).
  - A small amount of quinhydrone **MUST** remain undissolved; See FIG 3 if all the quinhydrone dissolves add a small amount and stir. Repeat as necessary until a small amount of quinhydrone remains un-dissolved.



**FIG. 4**

<u>PLATINUM ORP ELECTRODE IN 7 BUFFER/QUINHYDRONE MIXTURE</u>			
Temperature	20C (68F)	25C (77F)	30C (86F)
Readings (mV)	89-107	83-101	76-94
Readings (pH)	5.20-5.50	5.30-5.60	5.42-5.72

<u>PLATINUM ORP ELECTRODE IN 4 BUFFER/QUINHYDRONE MIXTURE</u>			
Temperature	20C (68F)	25C (77F)	30C (86F)
Readings (mV)	260-287	254-281	247-274
Readings (pH)	2.15-2.60	2.25-2.70	2.37-2.82

4. Rinse the ORP electrode and pat it dry with a soft tissue as shown in FIG 5.

- Put it in the beaker filled with the seven buffer/quinhydrone mixture, stir the electrode gently and let it rest against the side of the beaker.
- Allow the reading to stabilize for about 30 to 60 seconds and then note the reading.
- The reading should be within about plus or minus 15 mv from the values in FIG 4.

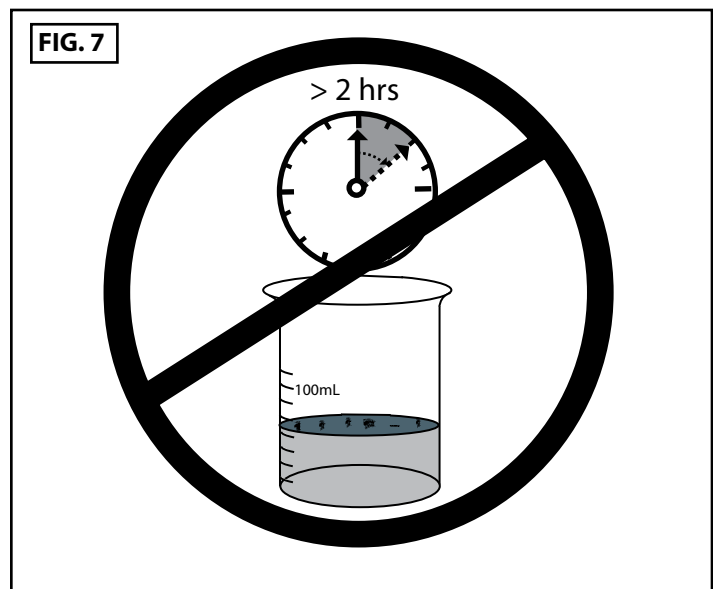
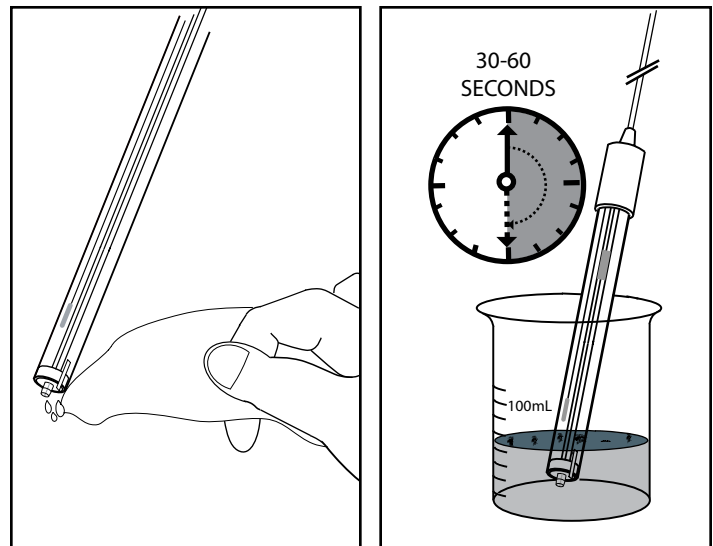
5. Rinse the ORP electrode and pat it dry with a soft tissue

- Put it in the beaker filled with the 4 buffer/quinhydrone mixture, stir the electrode gently and let it rest against the side of the beaker.
- Allow the reading to stabilize for about 30 to 60 seconds and then note the reading (SEE FIG 6).
- The reading should be between +170 mV and +185 mV above the reading in the 7 buffer mixture (step 4). For Example, if the reading from step 4 is +90 mV then the reading from this step should be between +260 mV (90 + 170) and +275 mV (90+185).
- With time and/or use, the value in the 7 buffer (step 4) may change. However, the +170 mV to +185 mV change in reading between 7 and 4 buffers (steps 4 and 5) should remain the same. Obtaining this reading means that the electrode has good span and should be able to be calibrated along with the meter to reflect the proper ORP (REDOX) potential

6. If a short span is found—less than a +170 mV change between the 7 and 4 buffers (steps 4 and 5)—the platinum measuring surface may be coated. Remove the coating by one of the following means:

- Wipe the surface clean with a soft cloth or tissue.
- Soak the electrode in a chemical known to dissolve the suspected coating material.
- As a last resort, very gently polish the surface with 600 grade wet silicone carbide paper.
- After cleaning, let the electrode soak in one of the calibration solution for about five minutes before re-calibrating

7. The buffer/quinhydrone mixture should be freshly made each time the ORP electrodes are calibrated. Do not store the mixture or use after two hours as their values change with time (SEE FIG 7).



## Section 1 - Chemical Product and Company Identification

**Catalog Number(s)**

B104, B204, B804

**Product Name**

BUFFER SOLUTION, pH 4.01(Color coded- RED)

**Manufacturer's Name**

Sensorex Corporation

**Emergency Telephone Number (24 hr)**
**Address (number, Street, City, State and Zip Code)**

11751 Markon Drive

**Telephone Number for Information**

(714) 895-4344

Garden Grove, CA. 92841 USA

**Date prepared**

4-10-2007

## Section 2 - Composition/Ingredient Information

Component	CAS Registry #	Percent Concentration	Exposure Limits	
			ACGIH TLV	OSHA PEL
Potassium Acid Phthalate	877-24-7	1.02	N/A	N/A
Inert Dye	Proprietary	02	N/A	N/A
Preservative	Proprietary	0.01	N/A	N/A
Water, Deionized	7732-18-5	Balance	N/A	N/A

## Section 3 - Hazards Identification

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### EMERGENCY OVERVIEW

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**DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**  
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**POTENTIAL HEALTH EFFECTS:**
**TARGET ORGANS:** Eyes, Skin

**EYE CONTACT:** May cause slight irritation

**INHALATION:** Not likely to be hazardous by inhalation.

**SKIN CONTACT:** May cause slight irritation.

**INGESTION:** Large doses may cause nausea, vomiting or cramps

**CHRONIC EFFECTS/CARCINOGENICITY:**

IARC - No

NTP - No

OSHA - No

**TERATOLOGY (BIRTH DEFECT INFORMATION):** No information.

**REPRODUCTION INFORMATION:** No information.

## Section 4 - First Aid Measures

**EYE CONTACT:** Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

**INHALATION:** Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

**SKIN CONTACT:** Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.

**INGESTION:** Dilute with milk or water. Call a physician if necessary.

## Section 5 - Fire Fighting Measures

**FLAMMABLE PROPERTIES:**

**FLASH POINT:** N/A

**METHOD USED:** N/A

**FLAMMABLE LIMITS:**

**LFL:** N/A

**UFL:** N/A

**EXTINGUISHING MEDIA:** Use any means suitable for extinguishing surrounding fire.

**FIRE AND EXPLOSION HAZARDS:** Not considered to be a fire or explosion hazard.

**FIRE FIGHTING INSTRUCTIONS:** Use normal procedures/instructions.

**FIRE FIGHTING EQUIPMENT:** Use protective clothing and breathing equipment appropriate for surrounding the fire.

## Section 6 - Accidental Release Measures

Absorb with suitable material (vermiculite, clay, etc) and dispose of in accordance with local regulations.

## Section 7 - Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. SAFETY STORAGE CODE: GENERAL

## Section 8 - Exposure Controls/Personal Protection

**ENGINEERING CONTROLS:** No specific controls are required. Normal room ventilation is adequate.

**RESPIRATORY PROTECTION:** Normal room ventilation is adequate.

**SKIN PROTECTION:** Chemical resistant gloves.

**EYE PROTECTION:** Safety glasses or goggles.

## Section 9 - Physical and Chemical Properties

<b>APPEARANCE:</b> Clear, red colored liquid	<b>pH:</b> 4.01
<b>ODOR:</b> Odorless	<b>BOILING POINT:</b> Approx 100°C/ 212°F
<b>SOLUBILITY IN WATER:</b> Infinite	<b>MELTING POINT:</b> Approx. 0°C/ 32°F
<b>SPECIFIC GRAVITY:</b> Approx 1	<b>VAPOR PRESSURE:</b> N/A

## Section 10 - Stability and Reactivity

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

**INCOMPATIBILITY:** Nitric acid

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of Carbon and Potassium.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## Section 11 - Toxicological Information

LD50, Oral, Rat: >3200 mg/kg (Potassium Acid Phthalate), details of toxic effects not reported other than LD50.

## Section 12 - Ecological Information

**ECOTOXICOLOGICAL INFORMATION:** No information found.

**CHEMICAL FATE INFORMATION:** No information found.

## Section 13 - Disposal Considerations

Dilute with water, neutralize with weak sodium hydroxide solution, and then flush to sewer if local regulations allow. Always dispose of in accordance with local, state and federal regulations.

## Section 14 - Transportation Information

<b>D.O.T. SHIPPING NAME:</b> Not regulated
<b>D.O.T. HAZARD CLASS:</b> None
<b>U.N. / N.A. NUMBER:</b> None
<b>PACKING GROUP:</b> None
<b>D.O.T. LABEL:</b> None

## Section 15 - Regulatory Information - (NOT ALL INCLUSIVE)

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

**TSCA STATUS:** All components of this inventory are listed on the TSCA Inventory.

**CERCLA REPORTABLE QUANTITY:** Not reportable.

**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

**NFPA Ratings:**

**Health:** 1

**Flammability:** 0

**Reactivity:** 0

**Special Notice Key:** None

**HMIS Ratings:**

**Health:** 1

**Flammability:** 0

**Reactivity:** 0

**Special Notice Key:** B  
(protective eyewear, gloves)

## Section 1 - Chemical Product and Company Identification

**Catalog Number(s)**

B107, B207, B807

**Product Name**

BUFFER SOLUTION, pH 7.00 (Color Coded-YELLOW)

**Manufacturer's Name**

Sensorex Corporation

**Emergency Telephone Number (24 hr)**

**Address (number, Street, City, State and Zip Code)**

11751 Markon Drive

**Telephone Number for Information**

(714) 895-4344

Garden Grove, CA. 92841 USA

**Date prepared**

3-12-2007

## Section 2 - Composition/Ingredient Information

Component	CAS Registry #	Percent Concentration	Exposure Limits	
			ACGIH TLV	OSHA PEL
Sodium Phosphate, Dibasic	7558-79-4	<1	N/A	N/A
Sodium Phosphate, Monobasic	7778-77-0	<1	N/A	N/A
Preservative	Proprietary	<0.1	N/A	N/A
Inert Dye	Proprietary	<0.1	N/A	N/A
Water, Deionized	7732-18-5	Balance	N/A	N/A

## Section 3 - Hazards Identification

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**EMERGENCY OVERVIEW**

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**DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**  
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**POTENTIAL HEALTH EFFECTS:**

**TARGET ORGANS:** eyes, skin

**EYE CONTACT:** May cause slight irritation

**INHALATION:**

**SKIN CONTACT:** May cause slight irritation to those allergic to phosphates

**INGESTION:** Large doses may cause stomach upset

**CHRONIC EFFECTS/CARCINOGENICITY:**

- IARC - NO
- NTP - NO
- OSHA - NO

**TERATOLOGY (BIRTH DEFECT INFORMATION):** No information

**REPRODUCTION INFORMATION:** No information

## Section 4 - First Aid Measures

**EYE CONTACT:** Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

**INHALATION:** Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

**SKIN CONTACT:** Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.

**INGESTION:** Dilute with milk or water. Call a physician if necessary.

## Section 5 - Fire Fighting Measures

**FLAMMABLE PROPERTIES:**

**FLASH POINT:** N/A

**METHOD USED:** N/A

**FLAMMABLE LIMITS:**

**LFL:** N/A

**UFL:** N/A

**EXTINGUISHING MEDIA:** Use any means suitable for extinguishing surrounding fire.

**FIRE AND EXPLOSION HAZARDS:** Not considered to be a fire or explosion hazard.

**FIRE FIGHTING INSTRUCTIONS:** Use normal procedures/instructions.

**FIRE FIGHTING EQUIPMENT:** Use protective clothing and breathing equipment appropriate for surrounding the fire.

## Section 6 - Accidental Release Measures

Absorb with suitable material (vermiculite, clay, etc) and dispose of in accordance with local regulations. Check with local agencies for the proper disposal of phosphate containing solutions.

## Section 7 - Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. SAFETY STORAGE CODE: GENERAL

## Section 8 - Exposure Controls/Personal Protection

**ENGINEERING CONTROLS:** No specific controls are required. Normal room ventilation is adequate.

**RESPIRATORY PROTECTION:** Normal room ventilation is adequate.

**SKIN PROTECTION:** Chemical resistant gloves.

**EYE PROTECTION:** Safety glasses or goggles.



## Section 9 - Physical and Chemical Properties

<b>APPEARANCE:</b> Clear, yellow liquid	<b>pH:</b> 7.00
<b>ODOR:</b> Odorless	<b>BOILING POINT (°C):</b> Approximately 100
<b>SOLUBILITY IN WATER:</b> Infinite	<b>MELTING POINT (°C):</b> Approximately 0
<b>SPECIFIC GRAVITY:</b> Approximately 1	<b>VAPOR PRESSURE:</b> N/A

## Section 10 - Stability and Reactivity

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

**INCOMPATIBILITY:** None identified.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Phosphorus oxides may form when heated to decomposition.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## Section 11 - Toxicological Information

LD50, Oral, Rat: (Sodium Phosphate Dibasic) 17 gm/kg; LD50, Dermal, Rabbit (Potassium Phosphate Monobasic) >4640 mg/kg; details of toxic effect not reported other than lethal dose value.

## Section 12 - Ecological Information

**ECOTOXICOLOGICAL INFORMATION:** No information found.

**CHEMICAL FATE INFORMATION:** No information found.

## Section 13 - Disposal Considerations

Dilute with water, then flush sewer if local regulations allow for flushing of phosphate-containing solutions. If not allowed, save for recovery or recycling in an approved waste disposal facility. Always dispose of in accordance with local, state and federal regulations.

## Section 14 - Transportation Information

<b>D.O.T. SHIPPING NAME:</b> Not regulated
<b>D.O.T. HAZARD CLASS:</b> None
<b>U.N. / N.A. NUMBER:</b> None
<b>PACKING GROUP:</b> None
<b>D.O.T. LABEL:</b> None

## Section 15 - Regulatory Information - (NOT ALL INCLUSIVE)

**OSHA STATUS:** The items listed on this MSDS 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 (29 CFR 1910.1200) definition of hazardous material.

**TSCA STATUS:** All components of this solution are listed on the TSCA Inventory are mixtures (hydrates) of items listed on the TSCA inventory.

**CERCLA REPORTABLE QUANTITY:** Sodium Phosphate, Dibasic - 5,000 pounds

**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

**PENNSYLVANIA:** Sodium Phosphate dibasic is listed as an environmental hazard on the state Hazardous Substance list.

## Section 16 - Other Information

<b>NFPA Ratings:</b>	<b>Health:</b> 1	<b>Flammability:</b> 0	<b>Reactivity:</b> 0	<b>Special Notice Key:</b> None
<b>HMIS Ratings:</b>	<b>Health:</b> 1	<b>Flammability:</b> 0	<b>Reactivity:</b> 0	<b>Special Notice Key:</b> None

## Section 1 - Chemical Product and Company Identification

**Catalog Number(s)**

B115, B125

**Product Name**

Quinhydrone, 20 grams

**Manufacturer's Name**

Sensorex Corporation

**Emergency Telephone Number (24 hr)**
**Address (number, Street, City, State and Zip Code)**

11751 Markon Drive

**Telephone Number for Information**

(714) 895-4344

Garden Grove, CA. 92841 USA

**Date prepared**

7-25-2007

## Section 2 - Composition/Ingredient Information

Component	CAS Registry #	Percent Concentration	Exposure Limits	
			ACGIH TLV	OSHA PEL
Quinhydrone (2,5-Cyclohexadiene--- 1,4-dione complex with 1,4 benzenediol (1:1); p-Benzoquinone compd. with hydroquinone; green hydroquinone	106-34-3	100%	XXXX-XX-X	<X

## Section 3 - Hazards Identification

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### EMERGENCY OVERVIEW

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**DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**  
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**POTENTIAL HEALTH EFFECTS:**
**TARGET ORGANS:** skin, eyes, lungs, GI tract

**EYE CONTACT:** Causes severe irritation and possible corneal ulceration.

**INHALATION:** Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

**SKIN CONTACT:** Causes severe irritation, redness and pain.

**INGESTION:** For Hydroquinone: Highly toxic. May cause hyperactivity, stupor, fall in blood pressure, hyperpnea, abdominal pain, diarrhea, intense thirst, tinnitus, nausea, dizziness, sensation of suffocation, increased respiration, vomiting, pallor, muscular twitching, headache, cyanosis, delirium, and collapse from respiratory failure. May cause green to brownish-green urine.

**CHRONIC EFFECTS/CARCINOGENICITY:** Repeated exposure to vapor or dust can cause brownish staining of the conjunctiva which may be followed by changes to the cornea leading to loss of visual acuity. Repeated exposure may also cause skin effects.

**TERATOLOGY (BIRTH DEFECT INFORMATION):** Not Available

**REPRODUCTION INFORMATION:** Not Available

## Section 4 - First Aid Measures

**EYE CONTACT:** Check for and remove any contact lenses. Do not use eye ointment. See medical attention.

**INHALATION:** Remove to fresh air. If not breathing give artificial respiration. Seek immediate medical attention.

**SKIN CONTACT:** After contact with skin, wipe off excess material then gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Clean all folds, crevices, creases and groin. Cover the irritated skin with an emollient. Seek medical attention if irritation persists. Wash all contaminated clothing before reusing. Clean shoes before reuse.

**INGESTION:** *DO NOT INDUCE VOMITING.* Examine the lips and mouth to determine whether the tissues are damaged, a possible indication that the material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as collar, waistband, belt. Perform mouth to mouth resuscitation if victim is not breathing. Seek immediate medical attention.

## Section 5 - Fire Fighting Measures

**FLAMMABLE PROPERTIES:** May be combustible at high temperature

**FLASH POINT:** 165C (329F) for Hydroquinone

**FLAMMABLE LIMITS:** Not available

**LFL:**

**METHOD USED:**

**UFL:**

**EXTINGUISHING MEDIA:** Dry chemical, alcohol foam or carbon dioxide.

**FIRE AND EXPLOSION HAZARDS:** Fine dust dispersed in the air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard

**FIRE FIGHTING EQUIPMENT:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in pressure demand or other positive pressure mode.

## Section 6 - Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner so as not to disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

## Section 7 - Handling and Storage

**Precautions:** Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical attention immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

**Storage:** Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. Protect from direct sunlight.

## Section 8 - Exposure Controls/Personal Protection

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering control to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**PERSONAL PROTECTION:** Splash goggles, lab coat, dust respirator. Be sure to use approved/certified respirator.

**PERSONAL PROTECTION IN CASE OF LARGE SPILL:** Splash goggles. Full suit. Respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

**AIRBORNE EXPOSURE LIMITS:** Hydroquinone - OSHA PEL= 2mg/m<sup>3</sup> (TWA), ACGIH Threshold Limit Value (TLV)= 2mg/m<sup>3</sup>(TWA), pBenzoquinone - OSHA PEL= 0/1ppm (0.4mg/m<sup>3</sup>) (TWA))

## Section 9 - Physical and Chemical Properties

**APPEARANCE:** Green metallic solid (powdered solid)

**ODOR:** Odorless

**SOLUBILITY IN WATER:** Slight in cold, soluble in hot water

**SPECIFIC GRAVITY:** 1.4

**MOLECULAR WEIGHT:** 218.20

**pH:** N/A

**BOILING POINT:** Sublimes

**MELTING POINT:** 171C (340 F)

**VAPOR PRESSURE:** N/A

## Section 10 - Stability and Reactivity

**CHEMICAL STABILITY:** This product is stable

**INCOMPATIBILITY:** Reactive with oxidizing agents, sodium hydroxide and strong alkalis.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Quinone and oxides of carbon may be formed when this material is heated to decomposition.

**POLYMERIZATION:** Does not polymerize

**CONDITIONS TO AVOID:** Heat, Flame, ignition sources, incompatibles, light and air

## Section 11 - Toxicological Information

**ROUTES OF ENTRY:** Dermal contact, eye, inhalation, ingestion.

**ANIMAL TOXICITY:** ORAL (LD50): Acute: 225mg/kg[Rat]

## Section 12 - Ecological Information

**ECOTOXICOLOGICAL INFORMATION:** N/A

**BOD5 and COD:** N/A

**PRODUCTS OF BIODEGRADATION:** Possibly hazardous short term degradation are not likely. However, long term degradation products may arise.

**SPECIAL REMARKS:** May decompose in presence of light. May decompose on exposure to moist air and water.

## Section 13 - Disposal Considerations

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

## Section 14 - Transportation Information

**D.O.T. SHIPPING NAME:** Not a DOT controlled material (USA)

**U.N. / N.A. NUMBER:** N/A

**PACKING GROUP:** N/A

**D.O.T. LABEL:** N/A

## Section 15 - Regulatory Information - (NOT ALL INCLUSIVE)

**OSHA STATUS:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

**TSCA STATUS:** TSCA 8(b) inventory: Quinhydrone

**CERCLA REPORTABLE QUANTITY:** N/A

**SARA TITLE III:**

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:** N/A

**SECTION 311/312 HAZARDOUS CATEGORIES:** Acute: YES Chronic: YES Fire: NO Pressure: NO Reactivity: NO

SECTION 313 TOXIC CHEMICALS: N/A

**RCRA STATUS:** N/A

**WHMIS (Canada):**

CLASS D- 1B: Material causing immediate toxic effects (TOXIC)

CLASS D- 2A: Material cause other toxic effects (VERY TOXIC)

**DSCL (EEC):**

R22- Harmful if swallowed

R38- Irritating to skin

R41- Risk of serious damage to eyes

## Section 16 - Other Information

**NFPA Ratings:**

**Health:** 3

**Flammability:** 2

**Reactivity:** 1

**Special Notice Key:** None

**HMIS Ratings:**

**Health:** 3

**Flammability:** 2

**Reactivity:** 1

**Special Notice Key:** None

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