

29 Centennial Road, Orangeville, ON, Canada L9W 1R1  
Canada/USA 1+ (800) 265-9161, Worldwide 1+ (519) 941-8161  
Email: [sales@iccontrols.com](mailto:sales@iccontrols.com), Website: [www.iccontrols.com](http://www.iccontrols.com)

### 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

#### Product Identifier

**Product Name** O.R.P. Buffer, +66 mV, PART B  
**Product Number(s)** A1100084  
**Pure Substance/mixture** Pure  
**Formula** 1-O: C<sub>6</sub>H<sub>4</sub>-4: OC<sub>6</sub>H<sub>4</sub>1,4-(OH)<sub>2</sub>  
**Shipping Name** Chemicals, N.O.S. (Non-Regulated)  
**Packaging** 2 mL capsules in 4 oz. Brown bottle

#### Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** Use as laboratory reagent  
**Uses advised against** Not available  
**Manufacturer/Supplier** IC Controls™  
29 Centennial Road, Orangeville, ON, Canada L9W 1R1  
**E-mail address** [sales@iccontrols.com](mailto:sales@iccontrols.com)  
**Made in** Canada  
**Emergency Telephone** IC Controls: (519) 941-8161  
Poison Info Center: 1 800 268-9017

### 2. HAZARDS IDENTIFICATION

#### Classification

##### WHMIS Regulatory Status

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).  
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).



#### Label Elements

**Emergency Overview** **DANGER:** Acute Toxicity  
**Appearance** Dark green crystals  
**Physical state** Powder  
**Odor** Odorless

#### Precautionary Statements

Do not handle until all safety information has been read and understood. May cause burns, skin irritation, and permanent damage to the eyes.

### **Hazards not otherwise classified (HNOC)**

Quinhydrone is photosensitive and must remain in dark container to preserve product integrity.

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight %
Quinhydrone	106-34-3	95-100

## **4. FIRST AID MEASURES**

### **First aid measures**

<b>General Advice</b>	Contact a physician for any serious cases of exposure.
<b>Eye Contact</b>	Flush immediately with plenty of water for at least 15 minutes and get medical attention.
<b>Skin Contact</b>	Flush with plenty of water.
<b>Inhalation</b>	Remove patient to fresh air.
<b>Ingestion</b>	Immediately induce vomiting if patient is conscious
<b>Protection of First-aiders</b>	Personal protective equipment.

### **Most important symptoms and effects, both acute and chronic**

<b>Acute</b>	Exposure to high dust concentrations causes irritation to upper respiratory tract. Eye and skin irritation.
<b>Chronic</b>	Repeated exposure to dust may result in corneal damage.

### **Indication of any immediate medical attention and special treatments needed**

<b>Notes to Physician</b>	Treat symptomatically.
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## **5. FIRE FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use extinguishing media appropriate for surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Specific Hazards Arising from the Chemical</b>	High temperatures can cause Quinhydrone to decompose.

### **Explosion Data**

<b>Sensitivity to Mechanical Impact</b>	None
<b>Sensitivity to Static Discharge</b>	None

### **Protective Equipment and Precautions for Firefighters**

Air mask should be worn.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment, and Emergency Procedures**

<b>Personal Precautions</b>	As required to prevent skin contact.
<b>Environmental Precautions</b>	Not available.

### **Methods and Materials for Containment and Cleaning Up**

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Cleaning Up</b>	Sweep material onto paper, place in dry container and cover. Flush spill area with water.

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**Product Number(s):** A1100084

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**Revision Date:** 2017-06-29

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

**Handling** Use in well ventilated area, use an approved dust ventilator if ventilation is inadequate.  
Use poly gloves and safety glasses.

### Conditions for Safe Storage, Including any Incompatibilities

**Storage** Quinhydrone is photosensitive and must remain in dark container to preserve product integrity.

**Incompatibility Products** Strong oxidizers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

#### Exposure Guidelines

Exposure limits: LD50 35 mg/kg (IV-mouse)

### Appropriate Engineering Controls

**Engineering Measures** Showers, eye wash station, and fume hood.

### Individual Protection Measures, Such as Personal Protective Equipment

**Eye/face Protection** Splash proof safety goggles.

**Skin and Body Protection** Lab coat and poly gloves.

**Respiratory Protection** Fume hood.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical State** Powder  
**Appearance** Dark green crystals  
**Odor** Odorless  
**Odor Threshold** Not available  
**pH Range** 7 (in solution) at 25°C

<u>Property</u>	<u>Values</u>	<u>Property</u>	<u>Values</u>
<b>Melting point/freezing point</b>	172°C	<b>Specific gravity</b>	1.4 (H <sub>2</sub> O = 1)
<b>Boiling point/range</b>	Not applicable	<b>Water soluble</b>	Not available
<b>Flash point</b>	Not applicable	<b>Solubility in other solvents</b>	Not available
<b>Evaporation rate</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Flammability (solid, gas)</b>	Not applicable	<b>Autoignition temperature</b>	Not applicable
<b>Flammability limit in air</b>		<b>Decomposition temperature</b>	Not available
<b>lower limit:</b>	Not applicable	<b>Kinematic viscosity</b>	Not available
<b>upper limit:</b>	Not applicable	<b>Dynamic viscosity</b>	Not available
<b>Vapor pressure</b>	Not available	<b>Explosive properties</b>	Not available
<b>Vapor density</b>	7.6 (air = 1)	<b>Oxidizing properties</b>	Not applicable

## 10. Stability and Reactivity

### Chemical Stability

Stable

### Possible Hazardous Reactions

Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

### Conditions to Avoid

None documented

### Incompatible Materials

Strong oxidizers.

### Hazardous Decomposition Products

Carbon monoxide and/or carbon dioxide

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation	Yes
Eye contact	Yes
Skin contact	Yes
Ingestion	Yes
Skin absorption	Yes

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Quinhydrone	Acute: 35 mg/kg mouse	Not available	Not available

### Information on Toxicological Effects - Symptoms

Eye	Irritation
Skin	Irritation
Inhalation	Irritation to upper respiratory tract.
Ingestion	Not available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	Not available
Mutagenic effects	Not available
Carcinogenicity	Not available
Reproductive effects	Not available
STOT – single exposure	Not available
STOT – repeated exposure	Not available
Aspiration hazard	Not available

## 12. ECOLOGICAL INFORMATION

<b>Eco-toxicity</b>	Not available
<b>Persistence and Degradability</b>	Possibly hazardous short term degradation products are not likely, however, long term degradation products may arise. The products of degradation are more toxic.
<b>Bioaccumulation/Accumulation</b>	Not available
<b>Mobility</b>	Not available
<b>Other Adverse Effects</b>	May decompose in the presence of light, exposure to moist air and water.

## 13. DISPOSAL CONSIDERATION

### Waste Treatment Method

<b>Waste Disposal Methods</b>	Dispose in accordance with all applicable federal, state/provincial, and local environmental regulations. Disposal in approved chemical incinerator is appropriate if available.
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## 14. TRANSPORT INFORMATION

### TDG

<b>UN-No</b>	None
<b>Proper Shipping Name</b>	Chemicals, N.O.S. (Not regulated)
<b>Hazard Class</b>	None
<b>Subsidiary Hazard Class</b>	None
<b>Packaging Group</b>	None
<b>Description</b>	O.R.P Buffer

### IATA

<b>UN-No</b>	None
<b>Proper Shipping Name</b>	Chemicals, N.O.S. (Not regulated)
<b>Hazard Class</b>	None
<b>Subsidiary Hazard Class</b>	None
<b>Packaging Group</b>	None
<b>Description</b>	O.R.P. Buffer

## 15. REGULATORY INFORMATION

### Canadian Federal Regulations

**WHMIS:** CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**NFPA Rating:** Scale (0-4): Health - 2 (moderate), Fire - 1 (slight), Reactivity - 1, Contact - 1

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

## 16. OTHER INFORMATION

<b>Issue Date</b>	2017-05-18
<b>Revision Date</b>	2017-06-29
<b>Expiration Date</b>	SDS is valid 3 years after revision date.
<b>Reason for Revision</b>	Update to WHMIS2015 format

**Disclaimer**

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**End of Safety Data Sheet**