

MATERIAL SAFETY DATA SHEETS

Milwaukee Instruments
2471 Hurt Drive
Rocky Mount, NC 27804
252-443-3630 fax 252-443-1937

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For assistance please contact: (508) 699-3075

Fax: (508) 699-3076

Toll Free: (877) 283-7837

SECTION I - PRODUCT IDENTIFICATION

Product Name: Redox Solution

Chemical Name: Potassium Hydrogen Phthalate and Quinhydrone

Formula: $\text{KH}_5\text{C}_8\text{O}_4 + \text{C}_6\text{H}_6\text{O}_2 - \text{C}_6\text{H}_4\text{O}_2$

Formula Weight: NA

CAS Number: NA

Chemical Family: Organometallic and Organic

SECTION II - INGREDIENTS

Potassium Hydrogen Phthalate

PCT: < 2

TLV: Not established

Hazard: NA

CAS No.: 877-24-7

SARA: Not listed

PEL: Not established

Quinhydrone

PCT: < 1

TLV: Not established

Hazard: NA

CAS No.: 106-34-3

SARA: Not listed

PEL: Not established

Water

PCT: < 100

TLV: Not established

Hazard: NA

CAS No.: NA

SARA: Not listed

PEL: Not established

SECTION III - PHYSICAL DATA

State: Liquid with brown solid

Odor: None

Other: NA

Boiling Point: > 100C

Melting Point: NA

Specific Gravity: 1.0

pH: NA

Storage Precautions: None

Appearance: Muddy Brown Color

Solubility: Water: NA

Acid: NA

Vapor Pressure (mm Hg): NA

Vapor Density (air = 1): NA

Evaporation Rate: NA

*NA/ND - Defined as not applicable or not defined.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA

NFPA Codes: Health: 1

Flammability: 0

Reactivity: 0

Toxic Gases Produced: NA

Fire Extinguishing Media: Water, carbon dioxide, foam or dry chemical

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): NA

Toxicity: LD50 (Oral-Rat): Quinhydrone = 35 mg/kg

This product is: May irritate eyes, skin and respiratory tract. Chronic skin exposure may cause dermatitis. High exposure to eyes may cause conjunctivitis. If swallowed, excess amounts may cause nausea, vomiting, or diarrhea.

Acute Toxicity: NA

Routes of Exposure: NA

Target Organs: NA

Chronic Toxicity: ND

Routes of Exposure: ND

Target Organs: ND

Cancer Information: NA

Routes of Exposure: NA

Target Organs: NA

Overexposure: May irritate eyes, skin and respiratory tract. Chronic skin exposure may cause dermatitis. High exposure to eyes may cause conjunctivitis. If swallowed, excess amounts may cause nausea, vomiting, or diarrhea. Medical conditions aggravated by exposure: May irritate eyes, skin and respiratory tract. Chronic skin exposure may cause dermatitis. High exposure to eyes may cause conjunctivitis. If swallowed, excess amounts may cause nausea, vomiting, or diarrhea.

SECTION VI - PRECAUTIONARY MEASURES

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Protective Equipment: Rubber gloves and safety glasses.

SECTION VII - FIRST AID

CALL FOR MEDICAL ASSISTANCE IMMEDIATELY.

Eye contact: Flush thoroughly with running water. Get medical help if irritation persists.

Skin contact: Wash exposed area with soap and water. Get medical help if irritation persists.

Ingestion: If large volume is swallowed, give large quantities of water and induce vomiting by touching finger to back of throat. Get medical attention.

SECTION VIII - REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: None

Conditions to Avoid: Heat

Incompatibles: NA

Decomposition of Products: Thermal decomposition may produce toxic oxides of carbon.

SECTION IX - SPILL AND DISPOSAL PROCEDURES

In Case of Spill or Release: NA

Disposal Procedure: Dispose of in accordance with all federal, state, and local regulations.

SECTION X - TRANSPORTATION DATA

Proper Shipping Name: NA

Hazard Class: NA

ID: NA

GROUP: NA

SECTION XI - REFERENCES

1) TLV's Threshold Limit Values and Biological Exposure Indices for 1988-1989. American Conference of Governmental Industrial Hygienists, 1988.

2) Air contaminants, Federal Register, Vol. 54, No. 12, Thursday, January 19, 1989. pp2332-2983.

3) Outside testing

4) In-house information

5) Technical judgment

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