

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Etching Blend

CAS # : 7764-38-2

Supplier : Sentury Reagents, Inc.  
2515 Commerce Dr.  
Rock Hill, SC 29730  
USA

Telephone : +1 803-327-6880

Fax : +1 803-327-3872

Emergency # (PERS) : +1 800-633-8253

International # : 011-801-629-0667

PERS account : 10613

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

#### OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Harmful by ingestion. Corrosive

#### Target Organs

Liver, Blood, Bone marrow

#### GHS Classification

Acute toxicity, Oral (Category 4)  
Acute toxicity, Inhalation (Category 1)  
Acute toxicity, Dermal (Category 5)  
Skin corrosion (Category 1B)  
Serious eye damage (Category 1)

#### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.  
H313 May be harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H350 May cause cancer.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P273 Avoid release to the environment  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P284  
Wear respiratory protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/ physician.

**HMIS Classification**

Health hazard: 3  
 Chronic Health Hazard: \*  
 Flammability: 0  
 Physical hazards: 0  
 Personal protection: F

**NFPA Rating**

Health hazard: 3  
 Fire: 0  
 Reactivity Hazard: 0

**Potential Health Effects**

**Inhalation** May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** Harmful if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns.  
**Ingestion** Harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : Orthophosphoric acid

Formula : H<sub>3</sub>O<sub>4</sub>P

CAS-No.	EC-No.	Index-No.	Concentration
<b>Phosphoric acid</b>			
7664-38-2	231-633-2	015-011-00-6	17 %
<b>Chromium trioxide</b>			
1333-82-0	215-607-8	024-001-00-0	15 %
<b>Water</b>			
7732-18-5	231-791-2	-	68 %

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**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIRE-FIGHTING MEASURES****Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine

Hazardous decomposition products formed under fire conditions. - Oxides of phosphorus

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. 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.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Phosphoric acid	7664-38-2	TWA	1 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye, skin, & Upper Respiratory Tract irritation			
		STEL	3 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye, skin, & Upper Respiratory Tract irritation			
		TWA	1 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	1 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	3 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		ST	3 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
Chromium trioxide	1333-82-0	TWA	0.001 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
Remarks	Potential Occupational Carcinogen See Appendix C See Appendix A			
	Substance listed; for more information see OSHA document 1910.1026			
	See 1910.1026. See Table Z-2 for the exposure limit for any operations or sectors where the exposure limit in 1910.1026 is stayed or are otherwise not in effect.			

## Personal protective equipment

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid, red
Colour	reddish

### Safety data

pH	no data available
Melting point/freezing point	n/a
Boiling point	158 °C (316 °F) - lit.
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.23 g/mL at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available

Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong bases, Powdered metals

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine

Hazardous decomposition products formed under fire conditions. - Oxides of phosphorus

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

#### Inhalation LC50

no data available

#### Dermal LD50

LD50 Dermal - rabbit - 57 mg/kg

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

Skin - rabbit - Corrosive

### Serious eye damage/eye irritation

Eyes - rabbit - Corrosive to eyes

### Respiratory or skin sensitization

May cause allergic respiratory reaction.

### Germ cell mutagenicity

May alter genetic material.

In vivo tests showed mutagenic effects

### Carcinogenicity

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Human carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (Chromium trioxide)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Chromium trioxide)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

May cause reproductive disorders.

### Teratogenicity

Suspected human reproductive toxicant

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

Inhalation - Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Ingestion</b>	Toxic if swallowed.
<b>Skin</b>	May be fatal if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns. Causes severe eye burns.

**Signs and Symptoms of Exposure**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

**Synergistic effects**

no data available

**Additional Information**

RTECS: GB6650000

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**12. ECOLOGICAL INFORMATION****Toxicity**

Toxicity to fish	LC50 - Tilapia mossambica - 21.05 - 141.38 mg/l - 96.0 h LC0 - Leuciscus idus (Golden orfe) - 100 mg/l - 48.0 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 0.8 mg/l - 48 h

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

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**13. DISPOSAL CONSIDERATIONS****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 3264      Class: 8      Packing group: III  
Proper shipping name: Corrosive liquids, acidic, inorganic, n.o.s., (phosphoric acid solution)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 3264      Class: 8                      Packing group: III                      EMS-No: F-A, S-B  
 Proper shipping name: Corrosive liquids, acidic, inorganic, n.o.s., (phosphoric acid solution)  
 Marine pollutant: No

**IATA**

UN number: 3264      Class: 8                      Packing group: III  
 Proper shipping name: Corrosive liquids, acidic, inorganic, n.o.s., (phosphoric acid solution)

**15. REGULATORY INFORMATION****OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Harmful by ingestion., Corrosive

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Phosphoric acid	7664-38-2	1993-04-24
Chromium trioxide	1333-82-0	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Water	7732-18-5	
Phosphoric acid	7664-38-2	1993-04-24
Chromium trioxide	1333-82-0	1993-04-24

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Water	7732-18-5	
Phosphoric acid	7664-38-2	1993-04-24
Chromium trioxide	1333-82-0	1993-04-24

**California Prop. 65 Components**

WARNING! This product contains a chemical known to the State of California to cause cancer.

	CAS-No.	Revision Date
Chromium trioxide	1333-82-0	2008-12-19

**California Prop. 65 Components**

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

	CAS-No.	Revision Date
Chromium trioxide	1333-82-0	2008-12-19

**16. OTHER INFORMATION****Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sentury Reagents, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.