

**Metrex Research Corporation**  
**MATERIAL SAFETY DATA SHEET**

Effective Date: October 2005

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**PRODUCT INFORMATION**

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**TRADE NAME:**

MetriShine

**PRODUCT USE:**

Descaler/Rust Remover

**MANUFACTURER: Metrex Research Corporation**

Metrex Research Corporation  
1717 West Collins Avenue  
Orange, CA 92867  
USA

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**SUPPLIER:** Metrex Research

a Division of Sybron Canada Limited  
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Canada

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**EMERGENCY PHONE:**

(USA) – Chemtrec: 1 (800) 424-9300 (24 hours)

(Canada) – Canutec: 1 (613) 996-6666 (24 hours)

**MOLECULAR WEIGHT:** Not applicable, mixture

**WHMIS CLASS:** D2B, E

**CHEMICAL NAME:** Mixture

**CHEMICAL FAMILY:** Not applicable, mixture

**CHEMICAL FORMULA:** Not applicable, mixture

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**HAZARDOUS INGREDIENTS**

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|                             | % BY WT. | CAS NO.   | ACUTE LETHALITY                           |
|-----------------------------|----------|-----------|-------------------------------------------|
| Phosphoric Acid (85% Conc.) | 35-45    | 7664-38-2 | LD <sub>50</sub> (oral, rat) = 1530 mg/kg |
| Glycolic Acid (70%)         | 10       | 79-14-1   | LD <sub>50</sub> (oral, rat) = 1950 mg/kg |

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**PHYSICAL DATA**

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**PHYSICAL STATE:** Liquid

**BOILING POINT:** ~100°C (212 °F)

**MELTING POINT:** not applicable

**VAPOUR DENSITY (air = 1):** not applicable

**SPECIFIC GRAVITY:** ~1.25

**% VOLATILE BY VOLUME:** not available

**pH:** Concentrate: <1.0 Diluted for use: 1.7 – 2.0

**ODOUR THRESHOLD:** not available

**EVAPORATION RATE: (n-Butyl acetate = 1):** not determined

**VAPOUR PRESSURE (mm Hg @ 20 °C):** not applicable

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** not available

**APPEARANCE AND ODOUR:** Clear to light straw colored liquid with a burnt sugar odor

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**FIRE OR EXPLOSION HAZARD**

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**FLASH POINT:** not applicable

**LOWER EXPLOSIVE LIMIT:** not applicable

**UPPER EXPLOSIVE LIMIT:** not applicable

**METHOD:** not applicable

**AUTO-IGNITION TEMPERATURE:** not applicable

**MEANS OF EXTINCTION:** Not considered to be a fire hazard

**SPECIAL FIRE FIGHTING PROCEDURES:** none known

**HAZARDOUS COMBUSTION PRODUCTS:** Toxic fumes of phosphorous oxides, oxides of carbon

**EXPLOSION DATA:** none known

**SENSITIVITY to MECHANICAL IMPACT:** none known

**SENSITIVITY to STATIC DISCHARGE:** none known

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**REACTIVITY DATA**

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**STABILITY AT ROOM TEMPERATURE:** This product is a stable solution within a closed container under normal conditions of storage and use.

**INCOMPATIBLE MATERIALS:** Avoid contact with strong caustics, metals, sulfides and sulfites.

**CONDITIONS of REACTIVITY:** Excessive heat

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic fumes of phosphorous oxides, oxides of carbon

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**TOXICOLOGICAL PROPERTIES**

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**OCCUPATIONAL EXPOSURE LIMITS:**

|                             | <b>ACGIH<br/>TLV-TWA**</b> | <b>TWAEV*</b>       |
|-----------------------------|----------------------------|---------------------|
| Phosphoric Acid (85% Conc.) | 1 mg/m <sup>3</sup>        | 1 mg/m <sup>3</sup> |
| Glycolic Acid (70%)         | not established            | not established     |

**NOTE:** \* Time-weighted average exposure value limits as published in Ont. Reg. 833/90 (as amended by Ont. Reg. 513/92) REGULATION RESPECTING CONTROL OF EXPOSURE TO BIOLOGICAL OR CHEMICAL AGENTS.

\*\* Threshold Limit Value of American Conference of Governmental Industrial Hygienists is concentration that can not be exceeded during an eight-hour exposure.

**EFFECTS OF ACUTE EXPOSURE TO PRODUCT (Routes of entry):**

**INHALATION:** Inhalation is irritating to the mucous membrane and respiratory tract. In extreme cases, severe irritation and burns may result.

**EYE CONTACT:** Corrosive. Causes severe irritation, pain and eye damage.

**SKIN CONTACT/ABSORPTION:** Corrosive. Causes severe irritation, redness, pain and skin burns to every area of contact.

**INGESTION:** Corrosive. Causes burns of the mouth, throat, and digestive tract.

**EFFECTS OF CHRONIC EXPOSURE TO PRODUCT:** Corrosive. Causes severe irritation, redness, pain and skin burns to every area of contact.

**SENSITIZATION TO PRODUCT:** unknown

**CARCINOGENICITY: TERATOGENICITY: REPRODUCTIVE TOXICITY:** No reported evidence of carcinogenicity or reproductive effects.

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**PREVENTIVE MEASURES**

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**HANDLING PROCEDURES and EQUIPMENT:** Use according to directions. Avoid personal contact. Prevent skin, eye and soft tissue contact. Do not breathe fumes, vapours or spray mist released from this product. Do not use this product at elevated temperatures. Washing facilities should be readily available when using this product. Wash thoroughly after handling and before eating, drinking or smoking. Food should not be used in area where this product is stored or handled.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES:** Chemical safety goggles and/or full face shield where splashing of solutions is possible.

**SKIN:** Wear impervious protective clothing, including boots, gloves, lab coat or apron as appropriate to prevent skin contact.

**RESPIRATORY:** Depending on the airborne concentration, a NIOSH/MSHA approved respirator may be worn for concentrations up to 10 times the TLV.

**ENGINEERING CONTROLS:** General mechanical and local exhaust ventilation to maintain airborne concentrations below occupational exposure limits. If ventilation is insufficient, wear suitable respiratory protection.

**STORAGE REQUIREMENTS:** Keep containers tightly closed. Store in a cool, dry well ventilated area, away from alkalis. Do not store with incompatible materials. Protect containers from damage.

**SPILL or LEAK PROCEDURE:** Isolate hazard area. Ventilate area of leak or spill. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with inert material and transfer to suitable container for disposal. Do not use combustible materials, such as saw dust. Do not flush to sewer! Dumping into sewer, onto the ground, or into any body of water may be prohibited by local sewer use by-laws. Wash residue from spill with water.

**WASTE DISPOSAL:** Wastes must be disposed of according to local, provincial or federal regulations.

**SPECIAL SHIPPING INFORMATION:**

|                        |                            |
|------------------------|----------------------------|
| REGULATED:             | DOT, IATA, IMO             |
| PROPER SHIPPING NAME:  | Phosphoric Acid (Solution) |
| HAZARD CLASS:          | 8                          |
| IDENTIFICATION NUMBER: | UN1805                     |
| PACKING GROUP:         | III                        |
| LABEL:                 | Corrosive                  |

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**FIRST AID**

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**EYE:** Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**SKIN:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.

**INHALATION:** Remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, contact a physician.

**INGESTION:** Do not induce vomiting. Give large quantities of water and get medical attention.

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**PREPARATION INFORMATION**

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**PREPARED BY:** SYBRON DENTAL SPECIALTIES, INC. (714) 516-7400

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