

# MATERIAL SAFETY DATA SHEET — 16 Sections

## SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product Identifier</b> EX-50 Weld Cleaning Solution (TC104-1, TC104-5 & TC104-20)		<b>[WHMIS Classification]</b> Class E	
<b>Product Use</b> For use in conjunction with an Electro Chemical weld cleaning machine to remove weld discolouration			
<b>Manufacturer's Name</b> Metal Science Technologies Pty Ltd		<b>Supplier's Name</b> Metal Science Technologies Pty Ltd	
<b>Street Address</b> 43 Shelley Road		<b>Street Address</b> 43 Shelley Road	
<b>City</b> Moruya	<b>Province</b> NSW	<b>City</b> Moruya	<b>Province</b> NSW
<b>Postal Code</b> 2537	<b>Emergency Telephone</b> 0411 217 986	<b>Postal Code</b> 2537	<b>Emergency Telephone</b> 0411 217 986
<b>Date MSDS Prepared</b> 03/04/13	<b>MSDS Prepared By</b> Metal Science Technologies Pty Ltd		<b>Phone Number</b> +612 4474 3394

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients ( <i>specific</i> )	%	CAS Number	LD <sub>50</sub> of Ingredient ( <i>specify species and route</i> )	LC <sub>50</sub> of Ingredient ( <i>specify species</i> )
Phosphoric Acid	< 55	7664-38-2	1530mg/kg Rat	850 mg/kg Rat
Citric Acid	< 5	77-92-9	3000mg/kg Rat	3000mg/kg Rat
Water	< 60	7732-18-5	N/A	N/A
Proprietary Ingredient	< 10	N/A	N/A	N/A

## SECTION 3 — HAZARDS IDENTIFICATION

<b>Route of Entry</b> Skin Contact /Absorption, Eye Contact, Inhalation & Ingestion
<b>Emergency Overview</b> Clear colorless liquid. Odorless. Will not burn. Can form very hazardous decomposition products. Contact with metals liberates flammable hydrogen gas. CORROSIVE. Causes severe skin burns and eye damage
<b>WHMIS Symbol</b> Class E (Corrosive Material)
<b>Potential Health Effects</b> <b>Eye:</b> May cause irreversible eye injury. Contact with liquid is corrosive to the eyes and causes severe burns. <b>Skin:</b> Contact with liquid is corrosive and causes severe burns and ulceration. The severity of injury depends on the concentration of the solution and the duration of exposure. <b>Ingestion:</b> Causes gastrointestinal tract burns. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. <b>Inhalation:</b> Causes chemical burns to the respiratory tract. Because its vapor pressure is negligible, it exists in the air only as a mist or spray. <b>Chronic:</b> Prolonged or repeated skin contact may cause dermatitis.

## SECTION 4 — FIRST AID MEASURES

<b>Eye Contact</b> In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
<b>Skin Contact</b> In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
<b>Ingestion</b> If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

**Inhalation**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**SECTION 5 — FIRE FIGHTING MEASURES****Flammable**

No

**Means of Extinction**

In case of fire in the surroundings, use appropriate extinguishing media.

**Flashpoint (°C) and Method**

Not applicable

**Upper Flammable Limit (% by volume)**

Not Available

**Lower Flammable Limit (% by volume)**

Not Available

**Autoignition Temperature (°C)**

Not Applicable

**Explosion Data — Sensitivity to Impact**

Not Applicable

**Explosion Data — Sensitivity to Static Discharge**

Not Applicable

**Hazardous Combustion Products**

Non-combustible liquid. Will not burn, or support combustion. Incompatible with oxidising agents, reactive metals zinc and bare steel, strong reducing agents, fluorine, bases, metals, metal oxides, metal alloys, strong bases, sulfur trioxide, phosphorous pentoxide, and sources of ignition. Fumes produced when heated to decomposition may include corrosive phosphorous oxides. This product transforms to pyrophosphoric acid at 200°C.

**NFPA**

(estimated) Health: 3; Flammability: 0; Instability: 0

**SECTION 6 — ACCIDENTAL RELEASE MEASURES****Leak and Spill Procedures****General Information**

Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO).

**SECTION 7 — HANDLING AND STORAGE****Handling Procedures and Equipment**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use with adequate ventilation. Discard contaminated shoes.

**Storage Requirements**

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Do not store in metal containers. Store protected from moisture. Store away from alkalies.

**SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION****Exposure Limits - ACGIH TLV**

ACGIH® TLV® - TWA: 1 mg/m<sup>3</sup>      ACGIH® TLV® - STEL [C]: 3 mg/m<sup>3</sup>

**Specific Engineering Controls (such as ventilation, enclosed process)**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protective Equipment**

Skin (Gloves, Footwear & Clothing), Respirator & Eye

**Skin**

Wear chemical protective clothing e.g. gloves, aprons, boots. Suitable materials include: butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyethylene, polyvinyl chloride, Viton®, Viton®/butyl rubber, Barrier® (PE/PA/PE), Silver Shield/4H® (PE/EVAL/PE), Trelchem® HPS, Trelchem® VPS, Tychem® SL (Saranex™), Tychem® BR/LV, Tychem® Responder, Tychem® TK.

**Respirator**

Up to 25 mg/m<sup>3</sup>: supplied air respirator. Operated in continuous flow mode. Up to 50 mg/m<sup>3</sup>: wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s), wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator. Up to 1000 mg/m<sup>3</sup>: wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator. ESCAPE: wear a full facepiece NIOSH approved air-purifying respirator with an appropriate cartridge.

**Eye**

Wear chemical safety goggles. A face shield may also be necessary.

## SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b> Clear liquid	<b>Odour and Appearance</b> Odorless, APHA: 10 max - colorless viscous	<b>Viscosity</b> 3.86 mPa.s
<b>Specific Gravity</b> 1.685 g/cm <sup>3</sup>	<b>Vapour Density (air = 1)</b> 3.4 (air=1)	<b>Vapour Pressure (mmHg)</b> 0.03 mm Hg @ 20 deg C
<b>Evaporation</b> Not available	<b>Boiling Point (°C)</b> 158 deg C @ 760 mm Hg	<b>Freezing Point (°C)</b> 21 deg C
<b>pH</b> 1.5 (0.1N aq. soln)	<b>Coefficient of Water/Oil Distribution</b> Not Available	<b>Solubility in Water</b> Miscible

## SECTION 10 — STABILITY AND REACTIVITY

<b>Chemical Stability</b> Stable under normal temperatures and pressures.
<b>Incompatibility with Other Substances</b> Metals, strong oxidizing agents, strong bases, amines, ammonia, sulfuric acid, nitromethane, sodium tetrahydroborate, A 5% solution of H <sub>3</sub> PO <sub>4</sub> is DOT corrosive to both aluminum & carbon steel (results: 272.1 mils/yr & 319.6 mils/yr, respectively). A 4% H <sub>3</sub> PO <sub>4</sub> solution corrodes aluminum at 209.1 mils/yr & carbon steel at 240.9 mils/yr.
<b>Reactivity, and under what conditions?</b> Excess heat, exposure to moist air or water.
<b>Hazardous Decomposition Products</b> Oxides of phosphorus.

## SECTION 11 — TOXICOLOGICAL INFORMATION

<b>Effects of Acute Exposure</b>	
<b>Eye contact</b> Severe irritant. May cause permanent damage.	
<b>Skin contact</b> Extremely corrosive.	
<b>Skin absorption</b> Not absorbed through the skin.	
<b>Inhalation</b> Corrosive to the respiratory system (mists or spray).	
<b>Effects of Chronic Exposure</b> See effects of acute exposure	
<b>Irritancy of Product</b> Can be severe	
<b>Skin Sensitization</b> Not considered a sensitizer	<b>Respiratory Sensitization</b> Not considered a sensitizer
<b>Carcinogenicity — IARC</b> CAS# 7664-38-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.	<b>Carcinogenicity — ACGIH</b> CAS# 7664-38-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
<b>Reproductive Toxicity</b> No information available.	<b>Teratogenicity</b> No information available.
<b>Embryotoxicity</b> No information available.	<b>Mutagenicity</b> No information available.
<b>Name of Synergistic Products/Effects</b> No information available.	

## SECTION 12 — ECOLOGICAL INFORMATION

<b>Ecotoxicity</b> Fish: Mosquito Fish: LC50 = 138 mg/L; 96 Hr; Unspecified No data available
<b>Environmental</b> The acidity of phosphoric acid may be reduced readily by natural water hardness minerals, but the phosphate may persist indefinitely. During transport through the soil, phosphoric acid will dissolve some of the soil material, in particular, carbonate-based materials. The acid will be neutralized to some degree with adsorption of the proton and phosphate ions also possible. However, significant amounts of acid will remain for transport down toward the groundwater table.
<b>Physical</b> No information available

## SECTION 13 — DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## SECTION 14 — TRANSPORT INFORMATION

**Shipping Name**

Phosphoric Acid

**Hazard Class**

8

**UN Number**

1805

**Packing Group**

III

## SECTION 15 — REGULATORY INFORMATION

**[WHMIS Classification]**

This product has a WHMIS classification of E.

**[OSHA]**

None of the chemicals in this product are considered highly hazardous by OSHA.

**[SERA]**

None of the chemicals in this product have a TPQ.

**[TSCA]**

None of the chemicals in this material have a SNUR under TSCA.

*This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.*

## SECTION 16 — OTHER INFORMATION

**MSDS Creation Date:** 3/04/2013

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*

**End of MSDS**