



**RedringSolder®**

**an ISO certified company**

**Material Safety Data Sheet**

**Of**

**XCELLENCE™ SOLDER ANODE**

**Type**

**CONE SHAPE**

**99.99%**

**REDRING SOLDER (MALAYSIA) SDN. BHD. (56167-X)  
LOT 17486, JALAN DUA, TAMAN SELAYANG BARU  
68100 BATU CAVES, SELANGOR, MALAYSIA.**

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**MATERIAL SAFETY DATA SHEET**

**TYPE** : *Xcellence*<sup>TM</sup> Anode  
**REVISION** : 2

**SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****(a) PRODUCT NAME: PURE TIN SOLDER CONE****(b) PRODUCT CODE: None****(c) GENERIC CHEMICAL CLASS: Metal****(d) SUPPLIER NAME: REDRING SOLDER (MALAYSIA) SDN. BHD.****(e) MANUFACTURER NAME: REDRING SOLDER (MALAYSIA) SDN. BHD.****(f) ADDRESS: LOT 17486, JALAN DUA, TAMAN SELAYANG BARU,  
68100 BATU CAVES, SELANGOR, MALAYSIA.****(g) EMERGENCY TELEPHONE NUMBER: (603) 61385757  
FAX NUMBER: (603) 61381010****(h) PRODUCT USES: Industrial applications: Electronic industry. Soldering Metal  
industry: Metallurgy****DATE PREPARED: 4<sup>th</sup> JANUARY 2002****NA: NOT APPLICABLE    NE: NOT ESTABLISH    NI: NO INFORMATION****SECTION 2 COMPOSITION AND INFORMATION ON INGREDIENTS****Hazardous ingredients 1% or greater / Carcinogens 0.1% or greater  
Composition of flux**

COMPONENTS	WT%	CAS Number	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Sn (Tin)	min 99.99	07440-31-5	2.0	2.0

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**MATERIAL SAFETY DATA SHEET**

**TYPE** : *Xcellence*<sup>TM</sup> Anode  
**REVISION** : 2

**SECTION 3 HAZARDS IDENTIFICATION****(a) Symptoms/Effect of Overexposure**

<b>Exposure limits</b>	<b>Ingested</b>	<b>LD (50)</b>	<b>NE</b>	<b>g/Kg</b>
	<b>Inhaled</b>	<b>LC (50)</b>	<b>NE</b>	<b>g/Kg</b>

**Routes of entry**       **Inhalation**     **Skin**     **Eyes**     **Ingestion**

**Target organs**      **Eyes, mucous membranes and respiratory system.**

**(b) Health Hazards (Acute and chronic)****Effects of Acute (severe short-term) Exposure**

**Inhalation**              **Fumes during soldering may cause irritation and damage of mucous membranes and respiratory system.**

**Skin contact**            **Possible local irritation**

**Skin absorption**        **None**

**Eye contact**            **Irritation from contact with smoke from soldering.**

**Ingestion**                **Not likely to occur.**

**Effects of Chronic (prolonged) Exposure**

**Prolonged or repeated contact with skin can cause a rash.**

**Breathing fumes during soldering may cause headache and irritation of mucous membranes.**



**MATERIAL SAFETY DATA SHEET**

**TYPE** : *Xcellence*<sup>TM</sup> Anode  
**REVISION** : 2

**(c) Medical conditions generally aggravated by exposure**

Pre-existing conditions of the lungs, chemical hypersensitivity and asthma

Continued breathing of high concentrations of evaporated vapors can affect the liver and central nervous system.

**SECTION 4 FIRST AID MEASURES****(a) Immediate Measure in Case of Over Exposure**

<b>Inhalation</b>	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.
<b>Hazardous Inhalation</b>	<b>Fumes:</b> May be harmful if inhaled. Evacuate the victim to a safe area as soon as possible. If victim is not breathing, perform mouth-to-mouth resuscitation. <b>SEEK IMMEDIATE MEDICAL ATTENTION.</b>
<b>Skin contact</b>	Prolonged and repeated contact with bare skin may cause Irritation. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap Seek immediate medical attention.
<b>Eye contact</b>	Immediately flush eyes with clean running water at least for 15 minutes. Seek medical attention.
<b>Ingestion</b>	Do not induce vomiting forcibly. Examine the lips and mouth To ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.



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<b>MATERIAL SAFETY DATA SHEET</b>	<b>TYPE</b>	: <i>Xcellence</i> <sup>TM</sup> Anode
	<b>REVISION</b>	: 2

**(b) Notes to Physician**

Lead and its inorganic compounds are neurotoxins, which may produce peripheral neuropathy. For an overview of the effects of lead exposure, consult Occupational Safety and Health Administration (appendix A of Occupational Exposure to Lead 29CFR1910.1025).

**(c) Medical Conditions Likely to be Aggravated by Exposure**

Diseases of the blood and blood-forming organs, kidneys, nervous and possibly reproductive systems.

Seek medical assistance for further treatment, observation and support if necessary.

**SECTION 5 FIRE FIGHTING MEASURES****(a) Fire and Explosive Properties of the Material**

<b>Flash point (Method used)</b>	NE
<b>Flammable limits</b>	LEL NE UEL NE
<b>Auto ignition temperature</b>	NA
<b>Hazardous products of combustion</b>	Carbon monoxide, carbon dioxide, aliphatic aldehydes
<b>Special fire fighting procedures</b>	Wear full protective clothing
<b>Unusual fire and explosion hazards</b>	None
<b>(b) Extinguishing media</b>	Carbon dioxide, foam, sand, cut off air
<b>(c) Basic fire fighting procedures</b>	NA



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**REVISION** : 2

**SECTION 6 ACCIDENTAL RELEASE MEASURES****(a) Procedures for responding to a release or spill**

- Small Spill** **MOLTEN METAL:** Let cool before picking up and returning to process or recycling. **OTHER:** Use appropriate tools to put the spilled solid in a container reserved to that effect.
- Large Spill** **MOLTEN METAL:** Let cool before picking up and returning to process or recycling. **OTHER:** Pick up solid material with appropriate instruments and put in designated area.

**SECTION 7 HANDLING AND STORAGE****(a) Handling practices and equipment**

- Handling** Use in a well ventilated area. Wear suitable protective clothing. When using does not eat, drink or smoke.  
 Wash exposed body parts thoroughly after handling.

**(b) Appropriate storage practices and requirements**

- Storage** No specific storage is required. Use shelves or cabinets sturdy enough to bear the weight of the chemicals. Be sure that it is not necessary to strain to reach materials, and that selves are not overloaded.

**Other precautions**

Operators should always wear rubber gloves when cleaning machinery, etc.  
 Since cleaning solvents can increase the sensitivity of skin to irritation, operators should wash with soap and water (not solvents) before eating or smoking to avoid the possibility of ingestion.

Avoid prolonged breathing of fumes. Avoid prolonged skin contact.



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**REVISION** : 2

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal protection**

**HANDLING:** gloves, safety glasses, dust respirator.  
**REMELTING:** heat resistant gloves, splash goggles or face shield, coveralls, dust and fume respirator or equivalent.

**Personal protection in case of a large spill**

NA

**Exposure guidelines**

**Chemical Name** CAS #  
**Tin** 7440-31-5

**Exposure Limits**

**TWA: 2 STEL: 0.2 (mg/m<sup>3</sup>) from ACGIH (TLV) [1997]**  
**Respirable**

**TWA: 2 (mg/m<sup>3</sup>) from ACGIH (TLV) [1993] SKIN**  
**Respirable**

**TWA: 2 STEL: 0.2 (mg/m<sup>3</sup>) from OSHA [1994] Respirable**



**MATERIAL SAFETY DATA SHEET**

**TYPE** : *Xcellence*<sup>1M</sup> Anode  
**REVISION** : 2

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** Yellowish gray metal, odorless

<b>Physical State</b>	<b>Solid</b>	<b>pH (1% soln/water)</b>	<b>NA</b>
<b>Boiling point</b>	<b>NA</b>	<b>Melting point</b>	<b>232°C</b>
<b>Vapor pressure (Pa / 25°C)</b>	<b>NA</b>	<b>Specific gravity (H<sub>2</sub>O = 1)</b>	<b>NA</b>
<b>Vapor density (Air=1)</b>	<b>NA</b>	<b>Evaporation rate (Butyl acetate = 1)</b>	<b>NA</b>
<b>Solubility in water</b>	<b>Insoluble</b>	<b>% Volatile by volume</b>	<b>NA</b>
<b>Viscosity (Pa.s)</b>	<b>NA</b>	<b>Partition coefficient (octanol/water)</b>	<b>NA</b>

**Hazardous mixtures of liquids, solids or gases**

**EXEMPT of aromatic: Hydrocarbons, alcohols, ethers, carboxylic acids, aldehydes, ketones, nitriles and amides.**

**SECTION 10 STABILITY AND REACTIVITY DATA**

<b>(a) Chemical Stability</b>	<b>Stable</b>	<b>X</b>	<b>(b) Condition to avoid: None</b>
	<b>Unstable</b>		

**(c) Incompatibility (Materials to avoid)**  
**Strong oxidizer, strong acids.**

**(d) Hazardous decomposition or byproducts**  
**When heated to soldering temperatures, the thermal degradation products may include aliphatic aldehydes and acids terpenes.**

**(e) Hazardous polymerization: will not occur.**



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**MATERIAL SAFETY DATA SHEET**

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**REVISION** : 2

**SECTION 11 TOXICOLOGICAL INFORMATION**

<b>Toxicity to animals</b>	<b>LD50: Not available</b> <b>LC50: Not available</b>
<b>Chronic effects on human</b>	<b>The product may be toxic to the reproductive systems, upper respiratory tract , skin , eyes , kidney , liver . lungs.</b>
<b>Others toxic effects on human</b>	<b>Fumes and/or dust produced by this product may be hazardous in case of ingestion, of inhalation.</b> <b>This product may be hazardous in case of skin contact (Irritant, sensitizer), of eye contact (irritant).</b> <b>Non-corrosive for skin. Non-permeator by skin.</b>
<b>Special remarks on Toxicity on animals</b>	<b>No additional remark.</b>
<b>Special remarks on chronic effects on Humans</b>	<b>Massive metal is not harmful. Overexposure of fumes may cause irritation to the respiratory tract, digestive system and to the eyes.</b> <b>Overexposure to tin oxide fumes may result in benign pneumoconiosis stannosis.</b> <b>Repeated or prolonged contact may cause skin irritation, dermatitis and/or an allergic skin reaction (sensitization) in susceptible individuals.</b>
<b>Special remarks on Other toxic effects on humans</b>	<b>MOLTEN METAL can cause severe BURNS! Fumes may irritate eyes and respiratory tract</b>



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**TYPE** : *Xcellence*<sup>TM</sup> Anode  
**REVISION** : 2

**SECTION 12 ECOLOGICAL INFORMATION**

**Does not contain substances listed on the Montreal Protocol**  
**Ecotoxicity** Not available

**BOD5 AND COD** Not available

**Mobility** The product is involatile, insoluble and will accumulate in the ground

**Products of biodegradable** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Bioaccumulation** Limited information indicates a potential to bioaccumulation.

**Toxicity of the products of biodegradable** The products of degradation are more toxic.

**Special remarked on the products of biodegradable** No additional remark.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Waste solder should be stored in sealed container for later disposal, usually by incineration. Wastes containing high levels of lead oxides are classified as a special waste under the COPA (Special waste) regulations 1980 must be disposed in accordance with Federal, State and Local laws and Regulations. Recycle, if possible.



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**SECTION 14 TRANSPORT INFORMATION**

<b>DOT classification</b>	<b>Not a DOT controlled material (United States)</b>
<b>Proper shipping name</b>	<b>NA</b>
<b>DOT identification number</b>	<b>NA</b>
<b>Packing group</b>	<b>NA</b>
<b>Hazardous substances reportable quantity</b>	<b>NA</b>
<b>Special provisions for transport</b>	<b>NA</b>
<b>UN Class</b>	<b>Not classified</b>
<b>IMDG-Class</b>	<b>Not classified</b>
<b>IATA-Class</b>	<b>Not Restricted</b>
<b>ADR/RID-Class</b>	<b>Not classified</b>
<b>IMDG-Marine Pollutant</b>	<b>No</b>

**SECTION 15 REGULATORY INFORMATION****SARA Title (Section 313)**

**Lead is present in this product at a level, which requires reporting under this statute.**

**Toxic Substance Control Act (TSCA) Status**

**All ingredients of these products are listed on the TSCA inventory.**


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**REVISION** : 2**SECTION 16 OTHERS INFORMATION****(a) Hygienic Work Practice**

Foods and drinks should not be consumed or tobacco products used, nor cosmetics applied in areas where solder may be used.

Always wash hands after handling solder and before heating, drinking and smoking.

**(b) References**

ACGIH, Threshold Limit Values, 1994-1995.

CFR29, OSHA's Permissible Exposure Limits, revision July, 1993.

TSCA (Toxic Substance Control Act), Chemical Substance Inventory List, 1985.

IATA, Dangerous Goods Regulations, 37<sup>th</sup> edition (January 1, 1996).

**(c) Other Special Considerations**

All ingredients with susceptible hazards those are present in a concentration greater than 1% (greater than 0.1% for carcinogens) have been disclosed in this safety document.

*The information contained herein is based on data considered accurate and is offered at no charge. The above data is typical of the product in general but batches may show variations. No warranty is expressed or implied regarding the accuracy of this data.*

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Page 12 of 12