

Safety Data Sheet

According to 1907/2006/EC, Article 31 REACH

Warton Metals Limited
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name	Hydro Flux Water Wash Cored Solder Wire (Leaded) Tin/Lead, Tin/Lead/Silver, Tin/Lead/Copper Alloys (see table in section 9 for alloys available).
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1.2. Relevant Identified uses of the substance or mixture and uses advised against

Description	Water wash solder wire for manual soldering .
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1.3. Details of the supplier of the safety data sheet

Company Address	Warton Metals Limited Grove Mill Commerce Street Haslingden Lancashire BB4 5JT England
Web	www.warton-metals.co.uk
Telephone	01706 218888
Fax	01706 221188
Email	sales@warton-metals.co.uk
Email of competent person	sds@warton-metals.co.uk

1.4. Emergency telephone number

Emergency Telephone Number	+44(0)1706 218888 (8am-5pm Monday-Friday)
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SECTION 2: Hazards Identification


Lead can be absorbed through the skin, care must be taken when handling leaded products.

2.1. Classification of the substance or mixture

Classification- EU Directive Main Hazards Inhalation	Fumes should not be breathed by the operator. Individuals who have previously used a rosin based solder wire may be sensitised and may subsequently show asthmatic symptoms when exposed to atmospheric concentrations below the occupational exposure limits, even when using a rosin free solder wire. Lead - Warning! Contains Lead. Danger of cumulative effects. Over exposure signs/symptoms:- blood impairment, central nervous system depression. May cause harm to the unborn child. Repeated or prolonged exposure to the substance can produce reproductive system damage. Solder alloys containing lead give off negligible lead fume at normal soldering temperatures up to 500°C. Contains lead which is a cumulative poison. Long-term effects include anaemia, fatigue, abdominal pain, anorexia, constipation or diarrhoea and reduced oxygen carrying capacity of blood. It can also cause birth defects and other reproductive harm.
Ingestion Skin Contact Eye Contact Environmental	May be harmful if swallowed. Molten metal may cause severe damage to the skin. Can be irritating to eyes. Lead in the product may leach from landfill as salts and these are potentially hazardous to aquatic organisms.

2. Label Elements EC 1272/2008 (CLP)

Classification- EC 1272/2008 Main Hazards	Lead – Reproductive toxicity (Category 1A)
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Symbols	 <p>GHS08 Signal Word: Warning H319: Cause serious eye irritation H360Df: May cause damage to the unborn child. Suspected of damaging fertility. P261: Avoid breathing fumes. P280: Wear protective gloves P285: In case of inadequate ventilation wear respiratory protection.</p>
Hazard Statements	
Precautionary Statements	

SECTION 3: Composition/Information on ingredients

3.1. This material is defined as a mixture

Chemical Name	CAS No	EC No.	REACH Registration Number	Conc. (% w/w)	Classification
Tin	7440-31-5	231-141-8	01-2119486474-28-xxxx	1-100	
Lead	7439-92-1	231-100-4	01-2119513221-59-xxxx	1-100	Repr 1A, H360
Silver	7440-22-4	231-131-3	01-2119555669-21-xxxx	<5	
Copper	7440-50-8	231-159-6	01-2119480154-xxxx	<2	
Dicarboxylic Acid Mix C4-6	68603-87-2	271-678-5	Not available	1-10%	H319

For actual alloy breakdown see section 9. Information on basic physical and chemical properties

SECTION 4: First Aid Measures

4.1. Description of first aid measures

Inhalation	<p>Inhalation of solder flux fume (at normal use temperatures) may cause respiratory distress and inhalation of lead fume (produced at temperatures above 500°C) can give rise to lead poisoning. Remove at once to fresh air. Keep warm and at rest. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If not breathing, give artificial respiration. If unconscious place in the recovery position and get medical attention immediately.</p> <p>Solder flux fumes may irritate eyes, Flush eyes with plenty of water. Make sure contaminated water washes away from the face and clear upper and lower eyelids. Continue to rinse for 10 minutes. The flux may spit during soldering. In cases where spitting flux has entered the eye seek medical attention.</p> <p>Wash off with soap and plenty of water. After contact with molten metal, flood the area with cold water and get medical attention if required.</p> <p>Rinse the mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious place in the recovery position. Obtain medical attention immediately.</p>
Eye contact	
Skin contact	
Ingestion	

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	<p>Prolonged or repeated exposure may cause an allergic reaction to develop. Prolonged or repeated exposure to the fumes emitted may cause irritation to the respiratory system.</p> <p>Irritating and abrasive.</p> <p>May cause irritation to skin.</p> <p>May cause irritation to sensitive individuals.</p> <p>Acute exposure to lead products can cause headaches, tiredness, irritability, constipation, nausea, stomach pains, anaemia or loss of weight. Continued uncontrolled exposure could cause more serious symptoms such as kidney damage, nerve and brain damage, infertility.</p> <p>An unborn child is at particular risk from exposure to lead, especially in the early weeks before a pregnancy becomes known. If you are a woman of child bearing age, you should make sure you follow good work practices and a high standard of personal hygiene. Severe lead toxicity has long been known to cause sterility, abortion and neonatal mortality.</p>
Eye Contact	
Skin Contact	
Ingestion	
Lead	

4.3 Indication of any immediate medical attention and special treatment needed

Seek medical attention if any symptoms persist
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SECTION 5: Firefighting Measures

5.1. Extinguishing Media

Use extinguishing media appropriate to the surrounding fire conditions. Water spray, dry chemical or carbon dioxide. Sand may be used for small fires.
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5.2. Special hazards arising from the substance or mixture

	Inhalation of the flux fumes given off at soldering temperatures will irritate the nose and throat. Lead is harmful if absorbed into the body and can cause birth defects and other reproductive harm.
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5.3 Advice for Fire Fighters

	Do not use water jet. Wear full protective clothing and self contained breathing apparatus operating in the positive pressure mode.
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SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

	Use personal protective equipment. Avoid inhalation of any fume from the hot solder. Avoid contact with hot product and wash hands after handling and before eating, drinking or smoking. Ensure adequate ventilation of the working area.
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6.2. Environmental precautions

	Do not allow product to enter drains, soil, waterways and sewers. Prevent further spillage if safe. Ensure solder is collected in suitable containers for disposal accordance with local and national legislation. Refer to section 13 for disposal.
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6.3. Methods and material for containment and cleaning up

	Sweep up and shovel. Keep in suitable closed containers for disposal. Observe personal hygiene methods.
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6.4. reference to other sections

	See section 2,8,13 for further information
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SECTION 7: Handling and Storage

7.1. Precautions for safe handling

	Ensure adequate ventilation of the working area. The fumes produced during soldering should be extracted away from the breathing zone of the operators using properly designed efficient, well-maintained, local exhaust ventilation. See HSG 37 and INDG 249, HSE publications for further information. Put on appropriate protective equipment (latex gloves or similar). Wash hands with soap and warm water after handling soldering products. Workers should wash hands before eating, drinking or smoking. Adopt best manual handling considerations when handling, carrying and dispensing. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Keep out of reach of children.
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7.2. Precautions for safe storage, including and incompatibilities

	Keep in a cool, dry, well ventilated area. Store in correctly labelled containers. Keep away from direct sunlight. Keep away from food and drink.
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7.3. Specific end use(s)

	Solder wire for hand soldering and automated soldering.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

Tin	2 mg/ m ³ 8 hour Time Weighted Average, UK EH40
Lead	0.15mg/m ³ Long Term Exposure Limits (8 hour TWA)
Silver	0.1 mg/ m ³ 8 hour Time Weighted Average, UK EH40
Copper	0.2mg/m ³ 8 hour Time Weighted Average, UK EH40

8.2. Exposure Controls

8.2.1 Appropriate engineering controls	To achieve adequate control, as required by the COSHH Regulations, extraction should be used to reduce exposure. Extraction should be properly maintained and in good working order. Please use health and safety guidelines to choose suitable extraction.
8.2.2. Individual protection measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day. Wash contaminated clothing before re-use.
Eye/face protection	Ensure that eye wash stations are close to the work area.
Skin / Hand protection	Wear protective clothing. Disposable vinyl gloves. Use safety goggles.
Biological Standards	Acute exposure to lead products can cause headaches, tiredness, irritability, constipation, nausea, stomach pains, anaemia or loss of weight. Continued uncontrolled exposure could cause more serious symptoms such as kidney damage, nerve and brain damage, infertility. An unborn child is at particular risk from exposure to lead, especially in the early weeks before a pregnancy becomes known. If you are a woman of child bearing age, you should make sure you follow good work practices and a high standard of

Environmental exposure controls	personal hygiene. Severe lead toxicity has long been known to cause sterility, abortion and neonatal mortality. The material possesses minimal risk to the environment.
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SECTION 9: Information on basic physical and chemical properties

State	Solid wire
Colour	Grey
Odour	Mild
pH	No data available
Melting point	See section below for individual alloys
Freezing point	Not available
Boiling point	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability limits	Not available
Vapour flammability	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Fat solubility	Not available
Partition coefficient	Not available
Autoignition temperature	Not available
Viscosity	Not available
Solubility	Not available

Alloy Table- please refer to your alloy supplied

Alloy Name	Alloy Breakdown	Melting Temperature °C	Alloy Name	Alloy Breakdown	Melting Temperature °C
60/40	Sn60/Pb40	183-188	15/85	Sn15/Pb85	227-288
63/37	Sn63/Pb37	183	LMP 62S	Sn62/Pb36/Ag2	179
50/50	Sn50/Pb50	183-212	TLS/5	Sn5/Pb94/Ag1	296-301
45/ 55	Sn45/Pb55	183-224	HMP 5S	Sn5/Pb93.5/Ag1.5	296-301
40/60	Sn40/Pb60	183-234	Sn10Pb88Ag2	Sn10/Pb88/Ag2	268-290
35/65	Sn35/Pb65	183-244	Alloy No1	Sn50Pb48.6/Cu1.4	183-215
30/70	Sn30/Pb70	183-255	Alloy No 2	Sn60Pb38.2Cu1.8	183-190
20/80	Sn20/Pb80	183-275			

Key: Sn-Tin, Pb-Lead, Ag-Silver, Cu-Copper

9.2. Other Information

Conductivity	No data available
Surface Tension	No data available
Gas group	No data available

SECTION 10: Stability and Reactivity

10.1. Reactivity	No data available on this product
10.2. Stability	
10.3. Possibility of Hazardous Reactions	Solder will react with strong oxidising agents.
10.4. Conditions to avoid	None
10.5. Incompatible Materials	Strong oxidizing agents
10.6 Hazardous Decomposition Products	Under normal conditions of use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects	
Inhalation	Fumes generated during use may cause sensitisation to the respiratory system and should be extracted away from the operator.
Ingestion	Skin contact should be avoided.
Skin Contact	No information available.
Eye contact	No information available
Target Organs	No information available
Germ cell mutagenicity	Acute exposure to lead products can cause headaches, tiredness, irritability, constipation, nausea, stomach pains, anaemia or loss of weight. Continued

Carcinogenicity	uncontrolled exposure could cause more serious symptoms such as kidney damage, nerve and brain damage, infertility. An unborn child is at particular risk from exposure to lead, especially in the early weeks before a pregnancy becomes known. If you are a woman of child bearing age, you should make sure you follow good work practices and a high standard of personal hygiene. Severe lead toxicity has long been known to cause sterility, abortion and neonatal mortality. No data available.
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SECTION 12: Ecological Information

12.1. Toxicity	Rated as slightly toxic to aquatic species
12.2. Persistence and degradability	
Lead Toxicity to fish	Mortality LOEC Oncorhynchus mykiss (Rainbow trout) – 1.19 mg/l- 96 hours LC50 – Micropterus dolomieu- 2.2mg/l- 96 hours Mortality NOEC- salvelinus fontinalis- 1.7mg/l-10.0d
Toxicity to daphnia and other aquatic invertebrates	Mortality LOEC- Daphnia-0.17mg/l-2h hours
12.3. Bioaccumulative potential	No data available
12.4. Mobility in soil	No data available
12.5. Results of PBT and vPvB assessment	No data available
12.6 Other adverse effects	No data available

SECTION 13: Disposal Considerations

General Information	
	Dispose of in compliance with all local and national regulations. Empty containers may contain product residue. The product container must be disposed of in a safe way.
Disposal methods	
	Contact a licensed waste disposal company. Avoid dispersal of spilt material and runoff in contact with soil, waterways
Disposal and Packaging	
	Do NOT reuse empty containers. Empty containers can be sent for disposal and recycling.
Further Information	
	For disposal with the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. 06 04 05 Wastes containing other heavy metals. Hazardous waste.

SECTION 14: Transport Information

Hazard Pictograms	
	Not hazardous for transport
14.1. UN Number	-
14.2. UN Proper Shipping Name	-
14.3. Transport Hazard Class	
ADR/RID	-
Subsidiary risk	-
IMDG	-
Subsidiary risk	-
IATA	-
Subsidiary risk	-
14.4. Packing Group	
Packing Group	-
14.5. Environmental Hazards	
Environmental hazard	No
Marine Pollutant	No

ADR/RID

Hazard ID	-
Tunnel Category	-

IMDG

Ems Code	-
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IATA

Packing Instruction (Cargo)	-
Maximum quantity	-
Packing Instruction (Passenger)	-
Maximum quantity	-

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
 15.2 Chemical Safety Assessment – A chemical safety assessment has not been carried out for the mixture.

Regulations	
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Commission regulation (EU) No 453/2010 of the 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94. Council Directive 76/769/EEC and Commission Directive 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1907/2006 of the European Parliament and of the council of 18 December 2006 concerning the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Directive (EEC) No 793/93 and Commission Regulation (EC) No 1488/94. Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC. (93/105/EC) and 2000/21/EC.

The Health & Safety at Work Act 1974

The Control of Lead at Work Regulations 2002 (SI 2002 No.2676)

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No.2677) as amended.

HSE Control of Lead at Work Regulations 2002- Approved Code of Practise and Guidance L132 and HSE Leaflet `Lead and You'. INDG 305, Sep 2003.

Solder Fume and You INDG248(rev)

MDHS83 Resin acid in rosin (colophony) solder flux fume HSE Books ISBN 0 7176 1363 1

SECTION 16: Other Information

Other Information	None
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Further Information

	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.
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