Safety Data Sheet

According to 1907/2006/EC, Article 31 REACH

Warton Metals Limited
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Certificate Number 1711
ISO 9001

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	Future HF No Clean Cored Solder Wire Tin/Lead, Tin/Lead/Silver, Tin/Lead/Copper Alloys (see table in section 9 for alloys available).

1.2. Relevant Identified uses of the substance or mixture and uses advised against

Description	No Clean Solder Wire for solder wire for hand soldering and automated soldering.

1.3. Details of the supplier of the safety data sheet

Company	Warton Metals Limited
Address	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)

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

Classification- EU Directive	
Main Hazards	Rosin – May cause sensitization by skin contact (fume). When rosin is heated in normal use, rosin fumes are irritating and may cause respiratory sensitisation by inhalation. Exposure to rosin based solder wires may cause sensitive individuals to develop eczema and/or asthma. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentration below the occupational exposure limits. Persons with a history of asthma, allergies or any respiratory problems should not be employed in any process in which the product is used. May cause an allergic skin reaction with repeated exposure. 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.
Inhalation	The fumes produced by heating rosin when the product is in normal use may cause sensitisation by inhalation, Solder alloys containing lead give off negligible lead fume at normal soldering temperatures up to 500ºC. Contains lead which us 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	May be harmful if swallowed.
Skin Contact	Molten metal may cause severe damage to the skin. Sensitization by skin contact. Rosin based solder flux and its fume can cause dermatitis.
Environmental	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/GHS)

Classification- EC 1272/2008	

Main Hazards	Rosin - Skin Sensitization (Category 1) Rosin - Respiratory Sensitization (Category 1) Lead – Reproductive toxicity (Category 1A)
GHS Symbols	  **GHS07** **GHS08**
Hazard Statements	**Signal Word: Danger** Contains colophony (rosin), lead H317: May cause an allergic skin reaction H334: May cause allergy or asthma symptoms of breathing difficulties if inhaled. H360: May damage fertility or the unborn child. H373: May cause damage to organs through prolonged or repeated exposure
Precautionary Statements	H411: Toxic to aquatic life with long lasting effects P260: Do not breathe dust/fume/gas/mist/vapours/spray. P273 – Avoid release to the environment P285: In case of inadequate ventilation wear respiratory protection. P302+P352:IF ON SKIN, Wash with plenty of soap and water. P304+P341: IF INHALED, If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. P333+P313: If skin irritation or rash occurs, get medical advice/attention.

SECTION 3: Composition/Information on ingredients

3.1. This material is defined as a mixture

67/548/EEC/1999/45/EC

Chemical Name	CAS No	EC No.	REACH Registration Number	Conc. (%w/w)	DSD 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	
Silver	7440-22-4	231-131-3	01-2119555669-21-xxxx	<5	
Copper	7440-50-8	231-159-6	01-2119480154-xxxx	<2	H400: Aquatic Acute 1 H412: Aquatic Chronic 3
Bismuth	7440-69-9	-	-	<20	
Rosin (Colophony)	8050-09-7	232-475-7	Not available	<10	Skin Sens 1, H317

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	Inhalation of solder flux fume (at normal use temperatures) may cause respiratory distress and inhalation of lead fume (produced at temperatures above 500ºC) 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.
Eye contact	Rosin based 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.
Skin contact	Rosin based solder flux fume may cause a skin rash to develop. If any skin rash develops seek medical attention. 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.
Ingestion	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.

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

Inhalation	Prolonged or repeated exposure may cause an allergic reaction to develop. Prolonged or repeated exposure to the fumes emitted may cause sensitization which could lead to occupational asthma. May cause irritation to respiratory system.
Eye Contact	Irritating and abrasive.
Skin Contact	May cause irritation to skin.
Ingestion	May cause irritation to sensitive individuals.
Lead	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 personal hygiene. Severe lead toxicity has long been known to cause sterility, abortion and neonatal mortality.

4.3 Indication of any immediate medical attention and special treatment needed

	Seek medical attention if any symptoms persist.

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.

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. The fumes produced by rosin may cause sensitisation by inhalation. Temperatures above 500ºC may produce vapours or fumes that, on cooling, may condense as heavy metals dust.

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.

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. Ensure adequate ventilation of the working area.

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.

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.

6.4. reference to other sections

	See section 2,8,13 for further information.

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 258 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.

7.2. Precautions for safe storage, including and incompatabilities

	Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers. Keep away from direct sunlight. Keep away from food and drink.

7.3. Specific end use(s)

	Solder wire for manual and automated soldering.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

Tin	2 mg/ m³ 8 hour Time Weighted Average, UK EH40
Lead	0.15mg/m³ Long Term Exposure Limits (8 hour TWA)
Rosin	0.15 mg/ m³ over a 15 minute reference period UK EH40: MEL (Skin sensitizer). 0.05 mg/m³ over an 8 hour reference period
Silver	0.1 mg/ m³ 8 hour Time Weighted Average, UK EH40
Copper	0.2mg/m³ 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 personal hygiene. Severe lead toxicity has long been known to cause sterility, abortion and neonatal mortality. For blood lead monitoring and medical surveillance requirements, refer to the Approved Code of Practise supporting the Control of Lead at Work Regulations. A woman employed on work which exposes her to lead should notify her employer as soon as possible, if she becomes pregnant. Employers should assess the risks at work for pregnant workers and workers who have recently given birth or are breast feeding.
Environmental exposure controls	No information available.

SECTION 9: Information on basic physical and chemical properties

State	Solid
Colour	Grey
Odour	Mild
pH	No data available
Melting point	See table below for melting points for specific 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	Insoluble in water

9.2. Other Information

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

Alloy Table- please refer to your alloy supplied

Alloy Name	Alloy Breakdown	Melting Temperature ºC
60/40	Sn60/Pb40	183-188
63/37	Sn63/Pb37	183
50/50	Sn50/Pb50	183-212
45/55	Sn45/Pb55	183-224
40/60	Sn40/Pb60	183-234
35/65	Sn35/Pb65	183-244
30/70	Sn30/Pb70	183-255
20/80	Sn20/Pb80	183-275
Alloy 296 HMP	Sn5Pb92Ag3	296-301

Alloy Name	Alloy Breakdown	Melting Temperature ºC
15/85	Sn15/Pb85	227-288
LMP 62S	Sn62/Pb36/Ag2	179
TLS/5	Sn5/Pb94/Ag1	296-301
HMP 5S	Sn5/Pb93.5/Ag1.5	296-301
Sn10Pb88Ag2	Sn10/Pb88/Ag2	268-290
Alloy No1	Sn50Pb48.6/Cu1.4	183-215
Alloy No2	Sn60Pb38.2Cu1.8	183-190
1/99	Sn1Pb99	300
60/40 Ant	Sn60Pb40Sb	183-188

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

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	Harmful if swallowed.
Skin Contact	Skin contact should be avoided. Rosin can cause sensitisation by skin contact, causing dermatitis.
Eye contact	No information available
Target Organs	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.
Germ cell mutagenicity	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.
Carcinogenicity	No data available.

SECTION 12: Ecological Information

12.1. Toxicity

	Rated as slightly toxic to aquatic species.

12.2. Persistence and degradability

Toxicity to fish (Lead)	Mortality LOEC Oncorhynchus mykiss (Rainbow trout) – 1.19 mg/l- 96 hours LC50 – Micropterus dolomieui- 2.2mg/l- 96 hours Mortality NOEC- salvelinus fontinalis- 1.7mg/l-10.0d
Toxicity to daphnia and other aquatic invertebrates (Lead)	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	-

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
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical Safety Assessment
A chemical safety assessment has not been carried out for this product.

Regulations	

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.

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.